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ISOLATION AFTER DIPHTHERIA.[1]

BY

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WHILST endeavouring to discover the cause of an outbreak of diphtheria in the girls' medical ward of the Children's Hospital, it occurred to me that it was within the bounds of possibility that the disease had been introduced by a patient, suffering from some other complaint, who had still active bacilli present in the throat or nose after some previous attack of diphtheria. This opinion was subsequently supported by the facts that came out on a systematic examination of all the cases in the ward and of cultures obtained during the apparent convalescent stage of that disease.

Before the introduction of the routine bacteriological examination by the Medical Officer of Health for the city of Bristol, most of us were, I believe, content to allow our diphtheria patients to go home or mix with other children at the end of a month, counting from the beginning of the illness, provided that no membrane could be seen in the throat and no nasal discharge existed. So universal has been this practice, that most if not all text-books state that isolation should be

[1] Read at the meeting of the Bristol Medico-Chirurgical Society on April 13, 1898.

enforced for only that period, while the Association of Medical Officers of Public Schools have fixed that limit before a boy may be allowed to return. I am quite prepared to admit that in the great majority of cases this period of time is quite sufficient, and that often it is a far longer time than is necessary; but the facts that I have collected go to prove that in some cases a much more protracted period of isolation is necessary and must be enforced.

In diphtheria we have a disease that is year by year becoming more common—a fact which I believe is generally accepted,—and so little is known, in spite of the vast collections of statistics on the subject, of how the disease is spread, that any suggestion, such as the one to be gathered from this paper, must be acceptable, and the practical conclusions to be learnt are of importance to physicians whether in practice or engaged in public health work.

It has been my practice at the Children's Hospital, ever since our Medical Officer of Health undertook to examine the swabs, to have inoculated tubes sent at short intervals for examination, and no patient has been allowed to leave the diphtheria ward till I got a negative report. The question, then, very naturally rises in one's mind: Of what value is a negative report by itself? Does it mean that the throat and nose are free from bacilli? I will not go so far as to say that; for on one occasion a negative report was given me, with a request that a further specimen might be sent. On this being complied with, a positive one was returned. But in most cases I believe a negative report is reliable, particularly in those cases in which it is most important—*i.e.* those in which the bacilli have been found to be present for a considerable time. In such cases there is a distinct difference in the appearance of the bacilli; they take on a different form, known as the "raisin-seed" or "grape-seed" shape, which is now recognised as a degenerate form of the bacillus. An illustration of this change is given in Pearmain and Moor's *Applied Bacteriology*.

Unless some precautions such as these are taken, I believe many cases are dismissed long before the throat or nose is clear, and children with active, virulent bacilli in their respiratory

passages are set free on the public. I can hardly imagine a better method of dissemination.

The outbreak to which I referred at the beginning of my paper had its counterpart at the General Hospital only a short time ago, and I hope someone who is better acquainted with the details will relate the experience there.

The first victim in our epidemic was a patient suffering from enteric fever. She was one of a family of three children who came under Dr. Elliott's care, and of these two died of diphtheria, contracted in the ward. She, when delirious in enteric, developed a foul nasal discharge, which was shown to contain D. bacilli. She died on November 7th. The second child early in November being convalescent, the temperature having been normal for a week again became febrile. This was at first taken for a relapse; but a nasal discharge appearing, followed by the appearance of membrane in the larynx necessitating tracheotomy, and a positive report being returned, proved the fever to be due to diphtheria. To this attack she succumbed.

The third child passed safely through both diseases. Following this, several other cases broke out. From a culture from Caroline V., admitted for chorea in September, a positive report was returned on December 5, a negative on January 4, 1898; from Isabella B. a positive was got on December 15, a negative on January 4; from Annie G. a positive on December 2, a negative fourteen days later; while from a ward almost as remote as possible, Emily S., a child of seven weeks old, admitted for a surgical operation, developed nasal diphtheria on December 5.

I never discovered to my complete satisfaction the primary case of this small epidemic, but I suspect very strongly that it was a girl who was only in the ward for twenty-four hours, and was removed by her parents. She had, it is true, no obvious symptoms of diphtheria, but I hold that it is in these cases that the danger lies.

In one or two of the above cases the diagnosis was made solely on the results of the bacteriological examination; and as no case was observed before the beginning of November, and yet a child who had been in the ward for a month for chorea

developed it, we may conclude that the disease was introduced from without and was not due to faulty drains—the usual assignable cause of an outbreak.

I have searched medical literature for some records of bacteriological examinations conducted systematically to discover how long the bacillus may remain active in the throat. Dr. Hermann Biggs,[1] of New York, examined 405 cases with this object in view, and in 245 no bacilli were found to be present three days after the disappearance of the membrane; so that in over 50 per cent. a very short period of isolation is required.

But in	103	they	could	be found for	7 days
,,	34	,,	,,	12	,,
,,	16	,,	,,	15	,,
,,	4	,,	,,	21	,,
and in	3	,,	,,	35	,,

Allowing, then, a week for the membrane to be present, at least 5 cases were dangerous for 41 days.

Observations of a similar character, but for a different object, were conducted by Dr. White.[2] He was testing the value of antiseptic sprays, etc., on the vitality of the bacillus, and in his observations the extreme limit was found to be, in spite of the attempts to destroy the parasite with a peroxide of hydrogen preparation known as pyrozone, 33 days from the commencement of the disease; whilst in one laryngeal case the bacilli were found 40 days after admission, and in another 48 days after the disappearance of the membrane.

Abel[3] has recorded a case in which for 65 days after the disappearance of the membrane the bacillus could be cultivated, and Dr. Macgregor,[4] in an article that appeared subsequent to the preparation of this paper, gives a case in which active bacilli were found in December in the throat of a boy aged six months, the attack of diphtheria having been recovered from in July; and Schäfer[5] cites cases in which they were found $7\frac{1}{2}$ months after the attack.

[1] *Med. Rec.*, 1894, xlvi. 323. [2] *Ibid.*, 545.

[3] *Centralbl. f. Bakteriol. u. Parasitenk.*, 1893, xiv. 756; see *Brit. M. J.*, 1894, i. Epitome, p. 16, and *Am. Year-Book Med. & Surg.* 1896, p. 993.

[4] *Lancet*, 1898, i. 716. [5] *Brit. M. J.*, 1895, i. 61.

Dr. Astley Gresswell[1] argues that in some persons the disease becomes chronic, and may recrudesce on exposure to damp or cold. I cannot help expressing the opinion, after reading this paper, that Dr. Gresswell's conclusions seem to me to be drawn rather from suppositions, or perhaps failures to find a satisfactory cause of the outbreak, than on well-ascertained facts. How or where patients take the disease is one of those mysteries yet to be solved; and, further, it is a well-known fact that the protection afforded by one attack is of short duration. Besides, in no case does it appear that a culture experiment or a microscopic examination was made; so that I think we may dismiss this argument as not proven.

The exceptional cases that have come under my observation are four. In each case antitoxin was given, and antiseptic sprays were employed in the nasal cases.

CASE 1.—Emily S., aged seven weeks, was admitted under Mr. Kendall for talipes, on September 4, 1897, and on December 1 it was discovered she had nasal diphtheria, the following reports being sent by the Medical Officer of Health :

Emily S., four months.

December 8, 1897.—Large amount and large club forms and wedges of diphtheria. Staphylococcus aureus. Diplococci.

December 24, 1897.—Diphtheria tending to involution forms. Diplococci. Staphylococcus aureus.

January 4, 1898.—Large amount and large wedge and involution forms of diphtheria. Staphylococcus aureus. Diplococci.

January 12, 1898.—Large amount, involution forms, wedges, and clubs of diphtheria. Staphylococci.

January 22, 1898.—Large amount, medium variety of diphtheria. Diplococci. Staphylococcus aureus.

February 1, 1898.—No diphtheria found. Staphylococcus albus. Diplococci.

February 3, 1898.—Fair amount, medium variety of diphtheria (well-marked wedges in violet, highly differentiated in blue). Staphylococcus aureus.

February 8, 1898.—Wedges and involution forms of diphtheria, fair amount. Diplococci.

February 18, 1898.—Wedges and involution forms of diphtheria, fair amount. Staphylococcus aureus. Diplococci.

February 26, 1898.—Luxuriant growth of diphtheria. Some staphylococci.

March 8, 1898.—Large amount, medium variety of diphtheria. Staphylococcus aureus.

March 18, 1898,—Large amount, medium variety (growth still luxuriant) of diphtheria. Staphylococcus aureus.

March 27, 1898.—No diphtheria found. Staphylococci. Diplococci.

[1] *Tr. Epidemiol. Soc. Lond.*, 1887, v. 57.

CASE 2.—Willie E., aged five, was admitted on June 17, 1897, with diphtheritic membrane on the fauces. Tracheotomy was done the following day by Mr. Kendall, and the patient progressed well, but unfortunately some stenosis of the trachea followed, producing inspiratory dyspnœa.

The following reports were given in this case:

June 18.—D. bacillus. Staphylococcus aureus.
June 27.—D. bacilli in large numbers. Staphylococci and small torulæ.
July 10.—D. bacilli still in good amount, some showing tendency to involution, but many apparently still in active growth.
July 27.—D. bacilli, active variety, has apparently assumed a chronic form.
August 14.—D. bacilli, marked numbers. Much staphylococcus aureus.
August 17.—D. bacilli still in large numbers, in a vigorous state of growth. Staphylococcus aureus. Torulæ.
August 24.—D. bacilli, large amount of medium. Staphylococcus aureus. Diplococci.
September 1.—(No D. bacilli.) A few suspicious forms, apparently involution staphylococci and diplococci, single and in chains, short streptococci.
September 3.—(No D. bacilli.) Staphylococci, diplococci, and short streptococci.

Therefore the bacilli were found from June 17 to August 24, a period of 68 days at the least, for the disease was present a day or two before the child came in, and the bacilli may have been in the throat after August 24 for a day or two.

The sequel of this case is interesting. The boy was admitted again in December, when the stenosis of the trachea nearly caused his death by asphyxia. Traction on the tongue brought about instant relief, and, no further attacks following, he was discharged. On February 7 I was summoned to attend his inquest. He had been found dead in bed, deeply cyanosed. No doubt another attack of dyspnœa had come on, and having no one to relieve him he died. The coroner did not accede to my request for a necropsy, so I cannot state positively the condition of the trachea.

CASE 3.—For the reports on this case I am indebted to Dr. Davies.

Mildred C., aged thirty-two, was notified on January 11, 1897, and a positive report given the next day.
January 13.—D. bacilli very small. Staphylococcus albus. Diplococci and torulæ.
January 19.—D. bacilli, moderate amount. Some involution forms. Diplococci and streptococci.

January 23.—D. bacilli, some small groups of typical wedges and diplococci chains. Fat bacilli in chains. Staphylococci.
February 2.—D. bacilli. One well-marked group. Diplococci invading epithelial cells. Not yet free.
February 12.—D. bacilli. Growth not very typical. Some large staphylococci colonies and fine growth. Still some involution forms of D. bacilli left.
February 20.—D. bacilli absent.

This gives a period of 32 days.

In addition to these cases, I have another, Winifred B., aged four, in whom the bacillus was found for 28 days—a nasal case; and another, Edith C., aged twenty-nine, for 23 days; in each of these the dates being taken from the first examination, and not from when the disease was first noticed.

The lesson that is to be learnt from these cases seems to me to be that no case should be allowed to mix with healthy persons until bacteriological examination has shown that the throat and nares are free from the bacillus, instead of mere isolation till the membrane appears to have gone. I believe that if this were more rigidly adhered to we should check the spread of diphtheria, which now appears in a most inexplicable way.

In the discussion which followed the reading of Dr. Rogers's paper, Dr. MICHELL CLARKE emphasised the importance of the subject dealt with by Dr. Rogers, and gave an account of a small outbreak of diphtheria at the General Hospital last year, which appeared to have originated from a child who suffered from a slight purulent nasal discharge, but had not had diphtheria. He alluded to the case of another child, in whose throat the diphtheria bacilli persisted for a very long time after the membrane had disappeared.—Dr. WATSON WILLIAMS drew attention to the need of recognising the nose as a possible source of the infection when diphtheria arose without obvious origin. It was now usual to make swab cultures out of the throat, but it was also important to examine the nasal passages and even, in some cases, to make cultures before we could safely declare a patient free from infection. He drew attention to an exhaustive article by Dr. Heaven, read before the Medical Officers of Health Association, dealing with the question of fibrinous rhinitis as a source of diphtherial infection.—Dr. J. O. SYMES had made frequent examinations in nine cases, and found the bacillus to persist, until the twelfth week, 12, 13, 20, 30, 22, 35, 32, and 24 days—an average of 30 days. He remarked that after the first ten days or fortnight the bacillus became altered in character, being short and "sprig-like." This short bacillus was not pathogenic to guinea-pigs. It frequently persisted for many weeks. Was this a modified Klebs-Löffler bacillus or the pseudo-bacillus? and were patients to be isolated when this variety persisted?—Dr. MARKHAM SKERRITT said that it had been stated that the disease did not necessarily spread to those brought into contact with a still infectious

patient; but that the closer this contact, the greater the probability of infection. He pointed out that this was not peculiar to diphtheria, and gave a striking instance where scarlet fever did not extend under conditions apparently most favourable to its dissemination. Hence it could not be assumed, because diphtheria failed to spread from a convalescent patient in whom the bacillus was still present, that therefore the organism was no longer in a virulent stage.—Dr. SHINGLETON SMITH, speaking on behalf of the much-tried and long-suffering parents of the boys in our public schools, hoped that the medical officers would not impose a long and probably unnecessary quarantine in all cases which were called diphtheria, in which the contagion appeared to be easily controlled and the risk of an extension of the disease infinitesimal. It did not follow that because an attenuated bacillus still existed, that therefore the patient should still be dangerous to those around him, and all clinical evidence tended to show that the degree of contagion could not be in proportion to the presence of the bacilli which had been found to survive for so many months after an attack.—In reply, Dr. ROGERS stated that he could not agree with Dr. Symes's view that our present knowledge of the bacteriology of diphtheria was very incomplete, nor did he think that the prolonged presence of the bacillus could be accounted for by a confounding of the pseudo-bacillus with the Klebs-Löffler. He referred to the work of Hewlett and Knight, who claim that they have been able to convert the pseudo-bacillus into the Klebs-Löffler by careful regulation of the temperature as well as the serum process; and also to Martin's investigations, which tended to show that the pseudo-bacillus can give rise to severe and genuine diphtheria if associated with streptococci, a fact which had also been made clear by Hewlett and Knight. So that even if the pseudo-bacillus was the one observed, it might, and often apparently did, cause diphtheria. He thought that the differentiation of the two was founded on very slight evidence.

ON OCCIPITAL PRESENTATIONS.

BY

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CASES of occipital presentation are of rare occurrence, and have received but little notice in most works on midwifery. A well marked case of this kind is therefore worth recording, especially when it is a cause, or it would be more correct to say, a consequence of difficult labour. Having been called to such a case not long ago, I made careful notes of it at the time of its occurrence, and have thought it worth while to record it, and point out certain peculiarities by which it was accompanied.

About 10.30 p.m., January 11th, 1897, Mr. Fendick requested me to see Mrs. R., living in Victoria Road, whom he was attending in her first confinement. He told me that the first stage was very tedious, chiefly owing to inefficient pains. These began about 3.30 a.m., January 11th, and had been going on all day. On examination I found that the os uteri was dilated to the size of a crown-piece, the membranes entire, and the head presenting. I could just feel the posterior fontanelle distinctly, in front of the centre of the os uteri; and also, a little to the left and behind the symphysis pubis, a firm, bony prominence, which I considered to be the occipital protuberance. The presentation was, in fact, a modification of the ordinary one induced by extreme flexion of the head. When consulted as to the advisability of applying the forceps, I decided in favour of delay until the os uteri was well dilated; because the patient's condition was good, there was no rigidity of the os uteri, and the presentation appeared to be favourable although not quite natural. We therefore determined to wait a couple of hours until the dilatation of the os uteri was well-nigh complete. I then made a further examination, which I found to be quite confirmatory of my previous diagnosis. The chief difference which I perceived was, that in consequence of some good effectual pains the head was rather lower in the pelvis, and a very considerable "caput succedaneum"

had formed over the occipital fontanelle. After waiting some time longer, and finding that the head still remained in the same position, I agreed to apply the forceps. In doing this I encountered some unexpected difficulties. By careful examination with both hands, I ascertained that the pelvic cavity was not very capacious, especially in its antero-posterior diameter. This no doubt accounted for an exaggeration of the movement of flexion which caused such an elongation of the occipito-mental diameter of the head, that although the posterior fontanelle, the presenting part, was quite low in the pelvis, both ears were too high up to be reached. I was thus unable to obtain so excellent a guide as the ears are in applying the forceps and also in locking the blades. I first of all tried Simpson's long forceps, applying, as usually recommended, a blade on each side of the pelvis; but without avail. I then tried the short forceps, which I often use towards the end of a labour. I succeeded better with these, but yet could not get a good grasp of the transverse diameter of the head, owing to the great amount of compression and moulding which that part had undergone in the pelvic cavity. Notwithstanding these drawbacks, however, I was able after some time to bring the occiput well down into the pelvic cavity and with some difficulty to accomplish delivery. The child, which was a boy, was tall and of large proportions, measuring 23 inches in length and 9 lb. 3 oz. in weight. Notwithstanding all our efforts, it made no attempts to breathe and we felt no cardiac pulsation. The great transverse compression of the head, no doubt, occasioned this result, for the "caput succedaneum" covering the posterior fontanelle was the largest swelling of this kind I have ever seen, excepting those which are called "cephalhæmatomata" and contain clots of effused blood. I afterwards heard from Mr. Fendick that his patient was going on well on the third day after the labour, and ultimately made a good recovery.

As some proof of the rarity of occipital presentations, I may mention that, reckoning from 1838 when I began midwifery practice as a pupil, up to 1885 when I had been more than twenty years in practice, I did not meet with a single case of this kind which I considered sufficiently well-marked to describe as such in my note-book; and this led me into some erroneous ideas about them. First, as to their extreme rarity. Perhaps I was too conscientious in this respect. I did not think it right to denominate any presentations as occipital in which the posterior fontanelle could not be recognised early in the first stage of labour, or remained as the presenting part quite late in the second stage; forgetting that there are many slight cases of narrow conjugate diameter in which the cavity of the pelvis soon becomes roomy enough, as the head descends, to allow it to perform the movement of extension as soon as it has passed the upper strait of the pelvis, and it thus changes into an ordinary position before the end of the labour. If the medical attendant does not see the case until after this change has taken

place, he will be very likely to attribute the delay in the first stage, especially in primiparæ, to the usual cause; viz., a rigid os uteri, which condition, perhaps, did not really exist. During the early years of obstetric practice I had access to no standard book on midwifery, either British or foreign, which gave a satisfactory account of the *rationale* of these cases, either as regards cause or effect. In an old French work on midwifery which I possessed, and which was written by Chailly, a pupil of the celebrated Dubois, I found a very short but unsatisfactory account of occipital presentations. This was illustrated by tolerable diagrams, but neither these nor the accompanying description gave a good idea of their mechanism. Nearly all the writers of that time, however, believed these presentations to be a cause of tedious and difficult labour, especially in primiparæ. I myself, like many others, thought that the tedious and difficult labour was in some way due to the untoward presentation, and did not grasp the real truth, that the presentation was the effect and not the cause of the difficult labour, and was really owing to a pelvis that was rather below the average capacity, than to one that showed signs of special deformity. As to the diagnosis, Chailly remarks, very truly, that the posterior fontanelle occupies the centre of the uterine orifice, whilst the anterior fontanelle is very difficult to reach if it be in front, and impossible if behind. The head also presents very much flexed. The diameter of this presentation is favourable to the descent of the head; it extends from the lower portion of the occiput to the vertex, and measures three inches and six lines. The diagnosis of the position is the same as in the full presentation, but more difficult to recognise because only one fontanelle can be reached.

There is no particular fault to be found in these remarks of Chailly's which I have just quoted respecting the diagnosis of occipital presentations; but the case is widely different in the remarks that follow respecting the *mechanism of expulsion* and the *prognosis* in such cases. In these he takes far too favourable a view as to the issue, and overlooks the difficulties attendant upon a slightly contracted pelvis, which in reality are the cause of this peculiar presentation. For instance, he states about the *mechanism of expulsion:* "There is only one peculiarity worthy to

be mentioned in spontaneous delivery—the first period of flexion is entirely wanting, for the head presents already very much flexed: it even becomes slightly extended in proportion as it descends. The expulsion is as easy as in the full presentation." And then he adds, as regards the *prognosis:* "In the great majority of cases the prognosis is as favourable as in the full presentation of the vertex. In the early contractions the head is righted or descends strongly flexed, and the delivery is as rapid and fortunate as if the head presented in full." From this optimistic view of the prognosis in occipital presentations which M. Chailly thus expresses I entirely disagree. The case I have recorded is a well-marked example of the difficulties which occasionally beset these cases and render them dangerous both to mother and child, but especially to the latter. My own opinion, in this respect, is quite borne out by the best authorities amongst more modern accoucheurs. I do not know any better authority on this subject, or one who gives a more graphic description of these attendant difficulties during labour, than Spiegelberg, whose excellent *Text-book on Midwifery* has been so well translated from the German, and published by the New Sydenham Society. In his description of what the older accoucheurs used to call the "Pelvis æquabiliter justo minor," Spiegelberg remarks: "In the *generally and uniformly contracted pelvis the head meets at the brim, i.e. ab initio, with an all round obstruction such as under normal conditions it only encounters at the lower apertures.* It therefore enters *strongly flexed*, with the *sub-occipito-parietal plane* in the brim. The point of the occiput forms the deepest portion of the presenting segment, the nape rests against the ilio-pectineal line, the summit of the vertex and the forehead lie on the opposite side, the face looks towards the fundus uteri, the long diameter of the head lies in the axis of propulsion, and the small fontanelle is near the middle of the pelvis (*occipital presentation*). . . . Frequently the head inclines first to one side then to the other, as if with no definite object, no controlling pressure being exerted from either side, and continues to do so, until it is firmly fixed by the 'pains.' At last it is driven in very much like a *wedge*, and flattened in width and depth by the all round pressure to which it is sub-

jected; it is elongated in a fronto-occipital direction. If it cannot force its passage, if the brim is too contracted for this, or if the contraction increases below, the head remains at last *in situ* as if walled in, '*impacted*.'

"The *moulding* can in these cases only be effected by a compression of the whole head, *i.e.* by an actual reduction in size. Hence arises the cylindrical form tapering towards the occiput, the flattening of the vertex and of the frontal bones, the prominence of the face, the sliding of one parietal bone over the other, the forcing inwards and even dislocation in that direction of the tabular portion of the occiput, the great diffuse caput succedaneum, and the absence of definite pressure marks; when the latter are present, they are usually produced by the promontory on the parietal eminence or on the posterior frontal bone, according as the head lay more in the transverse or in the oblique diameter." After concluding this very accurate description of the *moulding* undergone by the head, Spiegelberg remarks: "Amongst the three principal forms of contracted pelvis, it is the *generally contracted, flat pelvis* that *cæteris paribus* leads to the greatest difficulties and anomalies in the mechanism."

Next, as regards the mechanism of *expulsion* during these labours, I do not know of any modern writer who has pointed this out more clearly and concisely than an American physician, Dr. Parvin, Professor of Midwifery in Philadelphia, who on p. 506 of the edition of his work published in 1891 says: "Labor begins with the fœtal head at the pelvic inlet, for there is not, as there is in the majority of primigravidæ having a normal pelvis, descent of the head into the pelvic cavity during the last weeks of pregnancy. The resistance of the lessened inlet compels strong flexion of the head upon the chest, and thus, with the occiput below, the head enters, the biparietal diameter corresponding with the conjugate, and the suboccipito-bregmatic with the transverse; the sagittal suture is at first usually in the transverse diameter. The uniformity of the pelvic contraction shows itself by the strong resistance to any lessening of flexion, there being such constant and great pressure upon the frontal arm of the head-lever." A sufficient amount of pressure to produce such effects as these may arise in slight diminutions

of the conjugate diameter of the pelvic inlet, as may sometimes be observed in unduly small but symmetrical pelves, such as are called in obstetric language the "pelvis æquabiliter justo minor"—of which I have before spoken—or in the pelves which show diminution of the conjugate diameter arising from rickets in childhood. In such pelves as these last, the sacral promontory projects too much, and the pelvic cavity is too much encroached upon by the sacrum to allow readily the movement of extension. This happened in the case I have now described. Here I found that the more the child's head was forced down into the pelvis, the more resistance it encountered, especially as it happened to be a child of more than average size. Owing to this cause it had to undergo an amount of the moulding process which seriously compromised its safety, as the event proved. I think I never saw such an elongation of the occipito-mental diameter, except in a stillborn child, as this was. It exceeded the average length by at least two inches, and the large caput succedaneum which had formed over the posterior fontanelle had added still more to its apparent length. When the head thus becomes distorted by long pressure, it loses its round shape, and, as Spiegelberg remarks, assumes a wedge-shape form. Under these circumstances it is very difficult to secure a firm grasp of the head with the forceps; and the instrument either slips off, or adds still more to the injurious pressure which the child's head has already endured. Such complications as these render labours, when the occiput presents, painful, tedious, and difficult for the mother, and dangerous to the infant.

A SUGGESTION FOR THE TREATMENT OF GRAVES'S DISEASE.

BY

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ON the 12th of October last year I was asked to take charge of a case of well marked Graves's disease of some considerable duration, having been under treatment more or less during about eighteen months. There was a history of improvement up to a

point. The symptoms were well marked, and I may be allowed to describe them in some detail, as the case appeared to me to be fairly typical. The patient, who is rather short and inclined to be stout, is a woman of considerable mental gifts, who up to the time of her illness had occupied a good position as a lecturer and teacher in one of the best girls' schools in London, and who consequently had a very considerable amount of somewhat trying mental labours to accomplish, to which we may perhaps fairly attribute the onset of the disease; at least, it is a great predisposing cause in these cases.

When I first saw her she was lying on a sofa, and presented the typical features of Graves's disease. The thyroid gland was very much enlarged, the lobe on the right side being somewhat the larger of the two; both lobes were soft and pulpy in consistency, feeling spongy under the fingers on slight pressure; the noise of the blood-rush was very loud and blowing at each systole of the ventricle; the eyes had the prominent appearance so well known, as though something were pushing them out from behind. The usual condition when she was not on guard in the matter was for the white of the eye to show freely. The heart was slightly dilated, shown by the displaced apex-beat, but the sounds were normal and well marked, though fairly rapid. The pulse, which was quite regular with an even and full beat, numbered about 98 to the minute—not nearly so much as the tachycardia seen in many cases, but sufficiently marked when taken with the other symptoms. The skin was extremely dry and harsh, and patient complained very much of it. There was a considerable amount of flatulence and general dyspepsia with a history of years, as also long continued chronic constipation. She complained that the "spring" had gone out of her feet, so that she walked flat-footed. The eye was more prominent on the right side than on the left, the right side being that on which the gland-enlargement was most marked, and during treatment the relationship between the eyes and the gland has been kept in a very noticeable manner. The patient was unable to perform the slightest task without increasing the rapidity of the heart-beat, and sustained conversation had the same effect, or indeed any sustained mental effort, such as reading "solid

literature," had the same result. And lastly, the skin was of a peculiarly bronze brown colour, somewhat like that seen in Addison's disease. At first I was inclined to attribute the colour to her having spent some time at the seaside, lying on a chair-lounge exposed to the air and sun; but as the colour did not disappear, but varied with the moods of the disease, some days when she was not so well being more marked, at other times when she was feeling better a more natural colour prevailing, I was led to the belief that the pigmentation must in this case be looked upon as part of the general complaint; and it is to be noted that on the administration of thyroid gland substance, the brown colouration became very marked. It seems to me that there may possibly be some more intimate connection between Graves's disease and Addison's disease than has been so far acknowledged; at any rate, it seems fairly ascertained that in both diseases there is frequently affection of the sympathetic nervous system. In Graves's disease the disease seems most marked in the upper cervical ganglion, and in Addison's disease the trouble lies in the large sympathetic ganglia in the upper abdomen, whilst several of the other marked symptoms, such as tachycardia, are common to both diseases, and the degeneration of the thyroid gland in the one may have its analogue in the gland-degeneration which is so well recognised a result in the other. However, the space at my disposal does not permit of my entering more fully into the pathology of the subject; but in treating either of these two diseases it would be well to bear constantly in mind the undoubted fact that in both the sympathetic ganglia are somehow or other very frequently involved, and anything which can be done to obtain a healthier sympathetic action is likely to have an ameliorating effect on the disease. However, the pathology in both is at present somewhat obscure.

Before coming into my care the patient had been under treatment in London, and seems to have been brought under the influence of the drugs most used in such cases. Thymus gland had been tried without any marked success. Belladonna, whilst relieving some of the symptoms, seemed to increase the exophthalmos. Electricity had been applied to the eyes by

means of a double rheophore. Strophanthus and digitalis had been given, and valerian had been tried, combined with a certain amount of rest in the recumbent position. The result of all previous treatment seems to have been to get the patient into a certain improved condition, beyond which further progress seemed somewhat problematical. On taking charge of the case I was given a fair statement of previous treatment, and the result as it appeared to the patient and her friends, and so, to a certain extent, the ground was cleared for me. For some time previous I had been endeavouring to employ Schott baths, combined with what is known as Weir Mitchell treatment, in certain cases, and the result of the combination and modification which I had employed seemed to me to justify my treating this case of Graves's disease by that method, at the same time endeavouring to obtain what possible advantage I might from the use of drugs. Before however beginning this new treatment I tried the effect of small doses of thyroid gland substance, but the result arising from an increased dose was decidedly alarming. Every symptom previously mentioned was aggravated. Pigmentation increased, tachycardia became embarrassing, and the digestive organs were thrown completely out of order. In fact all the symptoms of a very severe case of Graves's disease became apparent, so that I began my treatment as it were *ab initio*.

The patient was kept in the recumbent position, and although she had never been able to digest milk previously, I prevailed upon her to try skimmed milk, beginning with a small quantity, about a pint a day; but to my surprise she took it from the commencement, and it was not long before she was able to take two quarts each day, with the greatest possible benefit to herself. For some weeks the symptoms seemed to vary a great deal from day to day, and did not seem to mend much. At this time I was administering strophanthus and valerianate of zinc, but it was not until I had begun the modified form of Nauheim bathing that I felt confident of any marked improvement. As it was thought unadvisable to have the patient removed to the bath-room, I began treatment by having her thoroughly sponged with the bath water (calcium

chloride and sodium chloride), and almost from the first she experienced benefit. The bath water was prepared from the formula recommended by the brothers Schott for making a weak bath, and the temperature I advised was 95° Fahrenheit; the area over the heart, around the gland and eyes receiving the chief attention. To relieve the persistent constipation I gave one half tamar indien as required. In about ten days the patient's appetite improved rapidly; she was now able to take two quarts of skimmed milk daily, and in addition she was able to eat a small meal of solid food at the ordinary meal times. The harshness of the skin became less troublesome, and the tachycardia improved. Both the condition of the gland and the state of the eyes showed improvement, and so I felt justified in not only continuing the treatment, but in increasing the strength of the bath water. About this stage of the treatment I added lactate of iron and iodide of potassium to the drugs employed, continuing the use of strophanthus. Under the combined treatment the patient began to improve rapidly. Lying the whole day in bed, she was now able to do some reading or light sewing without inducing any aggravation of the symptoms. I also about this time began the use of electricity, which I continued, but I do not think that any special benefit has been derived from its employment, although I took very considerable pains to have the current applied, always bearing in mind the doctrine of cervical sympathetic mischief. Sometimes I was inclined to believe that the application of one pole to the seventh cervical and the other over the area of cardiac dulness had some beneficial effect, but regarding that I am not at all prepared to dogmatise. Of the various drugs which I have employed for the purpose of affecting the heart's action I am not at all enthusiastic. Digitalis does not seem to me to exert any beneficial effect, if indeed it does not do real harm. Cactina, paraldehyde I have tried and given up. Strophanthus and convallaria majalis I still use, although, as I have said, even with regard to them I am by no means very enthusiastic, but still I believe they are the best we have at present for the purpose.

The use of lactate of iron, combined with rest in bed, the skimmed milk, and the ability to eat largely which comes to

those who drink it, seems to me to have a very valuable effect on the nervous constitution of the patient. The whole nervous tone seemed to undergo a change, and the patient's spirits rapidly improved, so that after about two months she began to feel so well that it was thought wise to allow her to get out of bed during a certain portion of the day.

As she was able to get up, I convinced her that she was now able to be put in a bath, a proposal she readily agreed to, being convinced of the benefit she had derived from even a limited sponging. The first Schott bath was made weak—twenty gallons of water, one pound of common salt, and four ounces of chloride of calcium. The temperature was kept at 95° Fahrenheit, and the duration of the bath was at first six minutes. The first bath was a pronounced success, the patient experiencing a fresh feeling of renewed vigour, and she was further pleased to find that the exertion of the bath and the subsequent drying process, which partook more of the nature of shampooing with a rough bath towel until the skin was rosy, had not increased the heart's action to any marked degree; as a matter of fact when I saw her, a quarter of an hour after the bath, the pulse had only gone up four beats to the minute, or from 88 to 92. The baths proving useful, they were continued for four mornings; then I called a halt for two days, and then a new series of baths, gradually increasing the strength. During the period the patient was able to read and sew in her lounge chair, to walk in her room, and converse as she pleased without experiencing the very slightest inconvenience.

The eyes had gone back very much, and only shewed the white prominently at very unguarded moments. The gland substance was becoming firm and the blood-rush less distinct. The pulse went down to about 88, and was not affected by moderate exercise, and all the other symptoms had greatly improved. The springiness of the foot had partly returned, and the bronze discolouration had almost entirely disappeared. From the ordinary plain calcium bath I proceeded to the stronger effervescing bath, formed by adding a quantity of hydrochloric acid and bicarbonate of soda to the ordinary bath, and I feel convinced that in this case the combined treatment

I have described has had a very marked and beneficial effect. The patient is now, although continuing treatment, in a wonderfully improved condition; she has been able to walk in her garden for a considerable time without inconvenience, and has even walked up and down stairs without experiencing any breathlessness or other disagreeable symptom whatever. All the symptoms which were so marked at the beginning have either disappeared or become most decidedly better. The pulse still remains about an average of 88, but the apex-beat of the heart is now in its normal position, which may be due to the reduction of the dilatation of the heart noted at the beginning, or not, according to the theory held as to the action of the Schott baths. The iodide of potassium seems to have had a good effect on the gland. The dose which I started with, three grains, produced symptoms of a cold in the head, so I increased the dose to eight grains, three times daily, when the disagreeable symptoms passed away, the only peculiarity complained of being an intolerable itching of the back, which ceased when the iodide was stopped or the quantity taken was reduced. To conclude then, the good result which I have obtained I believe to be in a great measure due to the combination of the Schott baths with the Weir Mitchell treatment, the drugs used being helps towards the result, but not in my opinion being at all sufficient to have caused it.

A CASE RESEMBLING IN MANY RESPECTS THE CONDITION KNOWN AS MUCOUS COLITIS.

BY

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THERE is described in several text-books, most fully I think in those of American authorship,[1] a condition called mucous colitis, and the symptoms ascribed to this disorder fit in very well with those observed in the case I am about to narrate. But I gather

[1] See Osler's *Principles and Practice of Medicine*, 1892, pp. 396-7.

that those who have recorded cases have been definitely of the opinion that the tubular false membranes have been composed entirely of dense mucus. The microscopical appearance observed in the following case negatives the view that the case I met with was of this nature.

A.B., a spinster, aged 46, was admitted on November 15th, 1896. She was sent to the hospital by her private medical attendant as a case of appendicitis.

She gave the following history on admission:—Until a fortnight ago I was in my usual health. My appetite had been good and my bowels regular. On Saturday afternoon, a fortnight ago, I went out for a walk in the country. On my way home I felt very chilly. When I got home I felt so unwell that I went to bed. Two hours afterwards I was seized with severe griping pain in the right side. I felt sick, and vomited several times during the night. I had not been eating anything likely to disagree with me. I have been in bed ever since the attack, with severe pain in my stomach.

The following notes were then made:—Very depressed and emotional. Temperature, 100.4°. Pulse, 100. Very foul, moist tongue. Says her bowels have not been open for fourteen days. Cannot say whether her medicine has contained opium. Lies on back with thighs drawn up. There is considerable abdominal tenderness and rigidity. There is specially noticeable resistance in the right flank. No distinct abdominal tumour can be made out. *Per vaginam*, nothing abnormal can be detected. Urine very acid, s.g. 1018, showing distinct trace of albumen. Heart and lungs normal.

The diagnosis was uncertain. The vomiting, which had been a marked feature at the onset, had been getting less and less frequent. The condition in the flank was scarcely definite enough to lead us to suspect an appendicitis of fourteen days standing and of acute onset. There was something in the patient's demeanour which seemed to negative the existence of a perforation of the intestine. Her anxiety was very demonstrative, and had an air of fussiness about it. Nevertheless, there was evidence of some acute abdominal disorder, and the symptoms pointed to the intestine as the part primarily affected: as to the condition of the peritoneum, we felt uncertain. Notwithstanding the previous constipation, we thought it wise to give opiates. Small doses of morphia were ordered.

During the first five days after admission the temperature was irregular. On the evening of November 18th it reached 101°. That was the highest temperature recorded. On the sixth day the temperature was normal, nausea and vomiting had become altogether things of the past, and the abdominal rigidity and tenderness were much less. The patient was still markedly depressed and emotional. There had now been no action of the bowels for nearly three weeks. On the seventh day, emboldened by the general improvement, I suspended morphia, and ordered castor-oil and simple enemata, to which the bowels responded, but not copiously.

On December 3rd, fourteen days after admission, and twenty-eight days after the onset of her illness, the patient passed *per rectum*, together with a little bright blood, a greyish semi-translucent hollow cylindrical cast, seven inches long. Small doses of morphia were thereupon re-ordered.

She went on improving, and had no recurrence of hemorrhage and

no return of pain. But eleven days after the passing of the first, she passed some more material of the same nature; and five days after that she passed another cylindrical piece, two inches long, inside which was fixed a scybalous mass of fæces.

She is at present in good health and good spirits, and is impressed with the idea that it is truly wonderful that she could ever have survived such a desperate illness as she seems to consider hers to have been.

When floated out in water the tube first passed, which some who saw it actually took at first sight to be a piece of intestine turned inside out, showed on its outer surface transverse ridges markedly suggestive of the folds of the mucous membrane of the small gut. The layer of which it was composed was about one-eighth of an inch thick. One end of the cylinder was well defined, and had a diameter of three-quarters of an inch. The other extremity was ragged, and showed a considerably larger lumen. In attempting to lift the cast from one vessel to another by slinging it over the handle of an ordinary bone penholder, it just broke in two of its own weight. The substance of which it was composed seemed, while floated in water, elastic and fairly firm, nor did the different parts of it show any tendency to stick together. But when a small fragment was removed and placed on a glass slide it lost its form, and behaved exactly like a little mass of rather dense mucus. When put into alcohol, a piece 3½ inches long rapidly lost weight, and became a shrivelled tube 1 in. long. It still, however, when thus shrunken showed the transverse ridges on its outer surface.

Microscopically the substance of which the cast is composed affords, in my opinion, evidence that originally it was a cellular formation. Coverslip preparations made by flattening out small fragments under slight pressure, when treated with hæmatoxylin, show well-defined, well-stained nuclei. In some places these appear thickly set in an almost structureless non-staining matrix. In others it is easy to make out the cell outlines, though these are for the most part imperfect. After repeated observations, I am forced to the belief that the substance in question consists of degenerated or semi-digested cells. Preparations stained with methyl blue show the whole to be swarming with micro-organisms, the predominating form being at any rate not unlike B. coli commune.

What could have been the cause and origin of this strange formation? To me there seemed at first sight three possibilities. (1) Had it been composed of parasitic amœboid cells? (2) Had it originally consisted of exuded leucocytes? Or (3) was it in reality a part of the intestine cast off, and altered by subsequent digestion and decomposition? This last mentioned view, I quickly discarded. But although I have examined many differently prepared microscopical specimens, I have still, day after day, found myself undecided between the first two alternatives. If the formation of this false membrane was in reality one of the results of a localised enteritis, then I must suppose that by the time it had reached us it was strangely altered. If it had once been fibrinous, it was no longer so.

THOT: AN EXALTED SURGEON AND PHYSICIAN.

BY

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PIETSCHMANN[1] has collected very interesting evidence from classical writers, Egyptian papyri, and monuments, of the god Thot, as a surgeon and physician. Although legendary, it is probably the earliest reference to the science and art of medicine, and is the embodiment of the earliest human ideas known to us on the subject.

Thot, the feudal divinity of Hermopolis in Middle Egypt, was represented by the sacred ibis and the cynocephalus. From earliest times he possessed a harem, in which however were only two wives—Nahmâûît, "she who removes evil," and Seshaît. Every traveller up the Nile has seen figures of them carved on the temple of Denderah. Like all other gods Thot possessed a soul and body, and through his body flowed the mysterious fluid "Sa," which carried health, vigour, and life, and he could communicate this to human beings by placing his hand on the nape of the patient's neck. By his incantations he could control

[1] *Hermes Trismegistos*, p. 20 et seq., 43 et seq., 57.

the progress of the Sun-bark; and he was himself a lunar god, who measured time, counted the days, numbered the months, and commanded the forces of the universe. He was Lord of the voice, Master of words and books, inventor of those magic writings which nothing in Heaven, or Earth, or Hades could withstand.[1]

In two pottery figures he is represented as a sacred ibis, which holds the goddess of Truth suspended from its beak by a ring; and also as a baboon or cynocephalus, who sits on his haunches with his forepaws on his knees, and in his eyes is a look of grave yet impenetrable wisdom.

On one occasion he played draughts with the moon, and won a seventy-second of its fires. With this he made five days and added them to the year, and so enabled Nûît to bring forth her five children. Râ had cast a spell over Nûît to prevent this happening on any month of any year, and so Thot managed to circumvent the Sun god. He also accompanied Isis on her melancholy journey to collect the fourteen pieces of the body of her murdered husband, Osiris. By Thot's help Isis succeeded, with the exception of one piece, which "member" the oxyrhyncus rising from the Nile greedily devoured.

By magic Thot ameliorated the discomfort entailed by the embalment of Osiris. With Horus and Isis he inscribed the bandages with protective figures and formulæ, decorated the body with amulets, and drew scenes of life beyond the tomb,[2] and by various rites he enabled Osiris to live again.[3] On his wings of an ibis he was able to carry the soul of the dead over the Lake of Kha to the Islands of the Blest and the shores of Paradise. There he weighed the heart of the deceased in the scales of Truth, and always merciful he bore down on the side of Truth, that judgment might be lenient.[4]

From being a deity he became a divine king, and, in addition to medicine, *all* the arts and sciences emanated from him, including astronomy and magic.[5] He carried "the painted Eye of

[1] Cf. "The Tale of Satni," *Contes populaires de l'Ancienne Égypte*—Maspero.

[2] Mariette. [3] E. Schiaparelli, *Il Libro dei Funerali degli antichi Egiziani.*

[4] Naville, *Book of the Dead*, vol. i, pls. cxxxiii.–cxxxix. Maspero, *Catalogue du Musée Égyptien de Marseille.*

[5] Jablonski, *Pantheon Ægyptiorum*, vol. iii., p. 159.

the Sun."[1] He instituted a calendar, and according to it, he who entered the world on 4th, 5th or 6th of Paophi died of marsh fever, of love, or of drunkenness,[2] but with the evil he gave the remedy: a little blood, a few nail parings, or some hair might be an irresistible charm. He could combat the evil spirits which possessed human beings, and left their traces on the brain, the heart, the lungs, and intestines.

Let us turn from the physician to the diseases he professed to cure. Migraine and violent headache were attributed to dead men or women, who entered into the living.[3] The Ebers papyrus,[4] the Berlin medical papyrus,[5] and Herodotus,[6] describe the diseases of the country, many of which are now in existence, and their diagnosis and treatment with much accuracy; and also the division of the profession into general practitioners and specialists, and their (imaginary) description of physiological processes and anatomical points.

Ophthalmia, abdominal diseases, affections of the bladder, worms, varicose veins, ulcers of the leg, the Nile pimple (which I can personally vouch for exists at the present date), epilepsy (Brugsch), and anæmia (one quarter of modern Egyptians are afflicted with anæmia, chiefly from anchylostomum duodenale, and also from bilharzia hæmatobia), all existed. Gastric catarrh is thus described: "The abdomen is heavy, the pit of the stomach painful, the heart burns and palpitates violently. The clothing oppresses the man and he can barely support it. Nocturnal thirsts. His heart is sick, as that of a man who has eaten of the sycamore gum. . . . If he seek to supply a want of nature he finds no relief. Say to this, 'There is an accumulation of humours in the abdomen, which makes the heart sick. I will act.'"[7]

The remedies were nearly anything that could be swallowed, solid or liquid. (Chabas, Brugsch, Stern, and Lüring.) Of vege-

[1] E. de Bergmann, *Historische Inschriften*, pl. lii.

[2] *Sallier Papyrus IV.*, pl. iv. l. 3, pp. 4–6.

[3] "The Leyden Papyrus," by Pleyte, *Études Égyptologiques*, vol. i.

[4] Pl. xxxvi. l. 4, pl. xliv. l. 12, pl. xcix. l. 1—c. l. 14.

[5] Pl. xv. l. 5, pl. xvi. l. 3.

[6] ii. 77, 84.

[7] *Medical Papyrus of Berlin*, pl. xiii. ll. 3–6.

tables, everything from herbs to trees; sawdust of the cedar was known as an antiseptic; sea salt, alum, nitre, sulphate of copper, flesh and viscera, secretions and excretions, blood and gall, "the milk of a woman who has given birth to a boy," the dung of a lion, a tortoise's brains, an old book (a book was a papyrus) boiled in oil (applied to the stomach to relieve the constipation of an infant, in other words a linseed meal poultice). The Egyptian physician was his own dispenser: fat was the vehicle for ointments, and water for draughts; but he did not despise the urine of men and animals, "the whole, sweetened with honey, was taken hot, night and morning."

Although my readers will see that the original physician was of divine origin, and enjoyed powers denied, alas, to his 19th century successors, yet we may at least lay claim to as long and as efficacious a list of remedies "to be swallowed," which list, judging from daily advertisements, is growing apace.

Progress of the Medical Sciences.

MEDICINE.

Since we find from the Registrar General's reports that 60,000 persons die annually in the United Kingdom from **phthisis** alone, it is clear that there is good reason for the perennial interest shown in the subject. If we cannot yet point to a specific remedy, we have at least a rapidly-diminishing mortality, and are no longer compelled to regard the disease as an incurable one. Nothing is more certain than that great numbers of patients in the earlier stages do regain good health under proper treatment. The manner of the spread of phthisis has had some fresh light thrown on it by the experiments of Arthur Ransome, who shows clearly that Koch's original statement that the bacillus is a pure parasite, multiplying only at or near the temperature of the body, is untrue. Ransome[1] has proved that it often lives as a saprophyte, growing on damp walls in dark, ill-ventilated houses. He used as media potato, wall-paper, and other substances previously soaked in the moisture collected from cellar air, human breath, and from the air of crowded rooms. On these substances the germ grew and multiplied at the ordinary indoor temperature of the air. Hence he naturally expresses a fear that lecture-rooms, churches,

[1] *Lancet*, 1898, i. 15.

theatres, and assembly-rooms, when dark and ill-ventilated, are but gardens for the cultivation of the bacillus. Others had grown the bacillus at low temperatures, but usually on some specialised medium.

Flügge,[1] however, shows that much of the fear of **infection** from the dust of dried sputum is ill-founded. Not only does the tubercle bacillus fail to float along as dust so readily as other microbes, such as the staphylococcus, but he states that almost all experimental infection of animals by the inhalation of dry dust has failed, though the dust from the rooms of patients readily induces the disease if inserted into the peritoneal cavity. From any less accurate observer such statements would be almost incredible; but even he allows that the finely-divided fluid sputum produced by coughing can be carried along in weak currents of air, and constitutes a source of danger. Thus light, ventilation, and dry air are still to be regarded as hindrances to the spread of the germs.

Gardiner's[2] researches on the **immunity** found **at high altitudes** are also helpful on the subject. First of all, he recognises that a very few cases of phthisis do arise there and are rapidly fatal: but there is no general spread of the disease even when many invalids are collected together, as in Colorado city; yet fresh bacilli grow there very well in cultivation tubes, but the dust from infected rooms is not poisonous when inoculated. The bacilli are therefore, rapidly killed by the dry and sunny climate and rarefied air. Another source of infection, too, is absent, for the cattle are almost exempt from tuberculosis and the milk is in consequence pure. But besides this absence of external infection, there must be something in the individual residents which increases their resistance and enables phthisical immigrants to recover. This he ascribes to several factors—the increased activity of expansion of the lungs, the stimulation of the nervous system by the climate, the dryness of the soil, and the increase of the red corpuscles in the blood, which is constantly found at high altitudes. It may be replied that the increase of red corpuscles is only a compensatory effort to obtain a normal amount of oxygen from the rarefied air, and if no more oxygen is carried in there can be no increase in the CO_2 given off. Still, there may be some indirect action unfavourable to the bacilli and helpful to the tissues in this condition or an increased excretion of some other product besides CO_2, though we know nothing of the chemical toxin formed or of the elements of the blood which neutralise it. In connection with this resistance of the blood to various toxins, reference may be made to the part played by the granules in the plasma, which are probably akin to those seen in the eosinophile leucocytes.[3] If both leucocytes and the

[1] *Deutsche med. Wchnschr.*, 1897, xxiii. 665; abstract in *Brit. M. J.*, 1898, i. Epitome, p. 13.
[2] *Am. J. M. Sc.*, 1898, cxv. 131.
[3] *Johns Hopkins Hosp. Bull.*, 1897, viii. 246.

free granules are removed from typhoid serum no "clumping" of bacilli takes place, and, indeed, the granules seem to take an active part in the attack, while the cells later on absorb the paralysed microbes. These results, however, merely confirm Kanthack's assertions as to the destruction of anthrax in the frog, and it is uncertain how far they apply to tubercle.

Whatever is the real cause of this immunity at altitudes above 5,000 feet, there is a large amount of evidence that remarkable success has been obtained by the **open-air treatment** of phthisis at lower levels, whether this arises from the prevention of associated infections or from the stimulus to the general health. One of the most interesting attempts has been that of Burton-Fanning,[1] who has treated a number of hospital patients in a sanatorium at Cromer, and finds better results from it than are given by any other method. His patients sleep with open windows, and spend the whole day in open huts or shelters on the lawn. They have plenty of rugs and hot bottles, and are carefully watched for the first week or two. Those whose temperature does not fall below 99.5° in the morning are not allowed out of bed, but those with only evening temperatures show gradual improvement under the treatment. Absolute rest in the shelters is enforced on all whose pulses are at all weak, and this he looks on as an essential part of the treatment; while a liberal diet is allowed to all, to which the rapid increase of appetite in the open air soon does justice. What is particularly noteworthy under such conditions is that greater improvement takes place in the cooler months than in summer, and that the treatment can be carried on in winter in the English climate, in spite of its constant changes and dampness. In Germany, indeed, proof is not wanting that successful out-of-door treatment is attainable, as at Nordrach and Falkenstein, at low levels and in treacherous climates; but, as the *Lancet* remarks,[2] the fact that the method can be used with advantage in our fog-bound island ought to lead to very marked results. If it is possible to dwell in the open air and yet to remain in one's native country, as these experiments show, there is a wide field for sanatoria, which may offer to phthisical patients far better means of recovery than are now within the reach of the inhabitants of our crowded cities. Since it is calculated that homes at present exist for only about one in two hundred of phthisical patients in the hospital classes, a great work is to be done if we aim at reaching the 30 per cent. of absolute or relative cures which are said to take place at Falkenstein, or even the 21 to 24 per cent. which are given at some of the high-altitude sanatoria.

The results of Koch's new **R tuberculin** seem to be generally unsatisfactory. One observer after another announces its failure, if not real dangers from its use. J. Dutton Steele[3] summed up

[1] *Lancet*, 1898, i. 630. [2] *Ibid.*, 942. [3] *Internat. M. Mag.*, 1897, vi. 756.

the reports to the end of the year by saying that the results on existing tubercular lesions are not yet definitely certain, but in lupus and some other cases it is valuable. The new product is not more dangerous than the old, if given carefully; but many samples are contaminated, and the increase of doses ordered is far too great and rapid.

On the other hand, **creasote**, when given in large enough quantities, does continue to find favour, and may be combined with climatic and other treatment. The full benefit is not, however, obtained till doses of from 30 to 90 drops are taken thrice daily. Chaumier [1] notices that guaiacol is in no way superior to pure creasote; but he finds that both may derange the digestion, and advocates on this ground **creasotal** in drachm doses. As a matter of fact, creasote simply beaten up in a cup of milk or well diluted in a mixture most often causes marked improvement of digestion. Von Leyden, however, of the Charité Hospital, makes the same complaint against creasote, but finds that creasotal has all its advantages without any drawbacks.[2] Indeed, he claims a specific action for creasotal given in doses of 5 up to 25 drops. His patients, if in an early stage, improved rapidly and steadily, and in some cases complete cures resulted. Creasote has also been found useful in tubercular peritonitis. Thomas [3] is opposed to laparotomy for this disease except as a last resort, since it only effects a cure where the tubercles are in the fibrous stage and is valueless where they are caseous; but he has given with much success enemata of 5 to 30 minims of creasote in olive oil every night, to which a few drops of laudanum may be added. It is interesting to find an ancient remedy, Bishop Berkeley's tar-water, also recommended as an alternative to creasote by Dr. A. James,[4] of the Edinburgh Infirmary; but most of these writers confess that the use of creasote and its allies is after all empirical, or at least only of value by destroying the associated bacteria, and it is therefore worth while remembering that Dr. Kington Fyffe showed definitely some years ago that tubercle bacilli become markedly degenerate in patients who have taken sufficient creasote, and when inoculated into animals produce little effect. Night sweats are often a great difficulty in treatment. Sometimes they are due to a secondary sepsis, sometimes to tubercular action alone. Salter [5] finds that the sweat generally contains large quantities of tuberculin, which is thus eliminated from the system. Hence he is opposed to interfering with it by atropine, camphoric acid, and other drugs. However, we check an eliminative diarrhœa when it becomes too violent for the patient's strength, except perhaps in uræmia and kidney disease, so that his argument may be carried too far.

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[1] *Lancet*, 1898, i. 222. [2] Quoted by Seifert, *Lancet*, 1898, i. 960.
[3] *Rev. méd. de la Suisse Rom.*, 1897, xvii. 712; abstract in *Brit. M. J.*, 1898, i. Epitome, p. 15.
[4] *Scottish M. & S. J.*, 1898, ii. 193. [5] *Lancet*, 1898, i. 152.

Pneumonia is now recognised to be a process set up by many different bacteria, even when lobar in type, and the difficulties of treatment are increased by our inability to distinguish clinically its varieties and their causes. Thus J. W. Moore[1] recognises, besides those forms due to the diplococcus and the bacillus of Friedländer, special types found in erysipelas, influenza, tuberculosis, and typhoid, as well as those due to actinomycosis, aspergilli, diphtheria, and, we may add, to the organisms of acute rheumatism and small-pox. Besides ordinary septic pneumonia complicating erysipelas, Moore has observed, in migratory pneumonia, patches of erysipelas on the skin, which changed their position as the area of consolidation in the lungs did. The exciting organism here seems to be a streptococcus; in influenzal pneumonia, besides Pfeiffer's bacillus, a similar growth, has been often discovered. A true pneumonia, due to the tubercle bacillus, occurs in cases of acute phthisis in young persons, while in typhoid, besides the frequent occurrence of septic and diplococcal pneumonia, during the depression due to typhoid poison, we find some evidence of occasional pneumonias produced by Eberth's bacillus itself. Generally speaking, the coccus of Friedländer is less virulent than the diplococcus of Fränkel, and this is itself a delicate organism which soon dies out—so much so, indeed, that in pneumonias lasting beyond the normal time we nearly always find some other microbe, such as the streptococcus.

Dürck[2] finds that any of these germs may be present in actually healthy lungs, and that if blown down a tracheal tube they are incapable of causing the disease. If, however, dust be injected, or the animals be first kept warm and then immersed in a cold bath, lobar pneumonia frequently follows such an insufflation. Recent research, too, has shown the presence of the diplococcus not only in the mouths of a few persons, but almost universally. In pneumonia, under favourable conditions, this organism not only multiplies in the lung-cells—that is, outside the body cavity,—but gains entrance to the blood and produces a true septicæmia. Thus Kohn[3] found it in the blood in 9 cases out of 32, and it is noticeable that seven of these were the only fatal ones of the series. On the whole, then, we see that various harmless microbes, when the body resistance is lowered, excite inflammation in the lungs, and even the diplococcus may produce a septicæmia. Thus no hard and fast line can be drawn between "croupous" and "septic" pneumonia. Little reliance has hitherto been placed in the various forms of serum proposed for pneumonia, and this is not surprising if we consider (1) the difficulty of diagnosing the active agent in the disease, (2) the possible existence of a

[1] *Brit. M. J.*, 1898, i. 14.
[2] *Deutsches Arch. f. klin. Med.*, 1896-7, liii. 368.
[3] *Deutsche med. Wchnschr.*, 1897, xxiii. 136; quoted in *Am. J. M. Sc.*, 1897, cxiv. 499.

depressing cause, such as the toxin of typhoid, which keeps open the gate for fresh infection. Still, good results have been obtained in many cases. Washbourn[1] immunised a horse for nine months and obtained a fairly powerful serum, capable of neutralising highly fatal doses of bacilli. Its protective power in early stages of the disease seems definite, but its bactericidal effects *in vitro* are uncertain and its antitoxic ones unknown.

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Another serum, or rather antitoxin, from which great things were hoped is that for **tetanus**, and Lambert,[2] in a valuable analysis of 114 cases where it was used, shows that it really has some value, though we are apt to think that mild cases get well with any treatment, and acute cases, *i.e.* those where the incubation period is not more than eight days, or if longer, is followed by very rapid progress,—that these die with or without treatment. In the 114 cases, with a total mortality of 40 per cent., there were 47 acute ones. If we exclude some doubtful cases and those where death took place before the injection had the necessary time to act, the mortality in these acute attacks was 61 per cent. and the recoveries 38. Now, as the mortality with ordinary methods amounts to 80 per cent., we see a clear saving of life equal to about 18 cases in a hundred. Though the antitoxin cannot undo the injury already done, it destroys any toxin circulating in the blood and any more which the bacilli may produce from their habitation near the original wound. The poison appears to be non-albuminous and the most deadly known to science, twenty times as fatal as the same weight of cobra poison and two hundred and fifty times as strong as strychnia. Nor does it seem to be a ferment, but an actual toxin elaborated by the bacilli which remain living near the spot where they originally entered. It is evident that disinfection of the wound is of the highest importance, but Lambert notices that ordinary disinfectants, such as carbolic and perchloride solutions, are inefficient unless mixed with a half per cent. of hydrochloric acid. Caustic potash in a .4 per cent. solution or trichloride of iodine may also be used as well as a thorough cleansing of the spot; and not least, if there is any reason to suspect infection, a preventive injection of the antitoxin is far more reliable than any measures taken after the symptoms have developed.

In most of these infections **prevention** may be carried out either by keeping away the active germ and the associated ones to which it owes its virulence, or by rendering the organism an unsuitable soil for it. Now, what constitutes an unsuitable soil? Apart from antitoxins, we are generally told to fall back on general constitutional measures, cleanliness and tonic treatment, for the latter half of the work. But such phrases imply

[1] *Brit. M. J.*, 1897, ii. 1849. [2] *N. York M. J.*, 1897, lxv. 754.

either ignorance or inaccurate expression. What, for instance, is "debility" but an inadequate diagnosis of a local lesion and its effects? Dirt, too, as Watson Cheyne said, is of no consequence, provided it does not contain germs. Thus Poehl's attempt to discover the causes of inefficient tissue respiration and vulnerability is in the right direction.[1] He thinks that this inefficiency depends on (1) low alkalinity of the blood, (2), defective oxidation, (3), retention of effete products, and (4) intestinal fermentation. An examination of the urine will show which of these factors are present. If the bisodic phosphates are less than half the normal, there is low alkalinity. Defective oxidation is present when the urea-nitrogen is less than nine-tenths of the whole nitrogen excreted, or when the sodium chloride is less than half the urea. Fermentation and auto-intoxication are shown by a great excess of indican, and by the organic sulphates amounting to more than one-tenth of the inorganic. A test in a simple form for the last condition is certainly a desideratum. Pelligrini,[2] from several experiments, thinks that we have a trustworthy index of the degree of toxicity of the urine in the amount of potassium indoxyl sulphate present. To estimate this he takes 4 c.c. of urine and adds slowly one-third of its volume of pure strong sulphuric acid. The tube is cooled by placing it in cold water, and 1.5 c.c. of pure chloroform is then added. The whole is mixed and the chloroform finally allowed to settle. If there is only a normal amount of the sulphate present the chloroform will show a light blue tint, which is darker if the amount is increased. In melancholia and other cases this sign will point to the necessity of correcting some digestive disorder.

G. PARKER.

SURGERY.

As sarcoma of the kidney is frequently found in young children, a recent paper[3] by Dr. George Walker, of the Johns Hopkins Hospital, is of great interest and importance. It is based on the records of 145 cases of **sarcoma of the kidney in children.**

The **pathology** of these tumours is of considerable interest. They are mixed tumours—growths composed of more than one kind of tissue—and hence are regarded by most pathologists as embryonic in origin. In fact it was a study of one of these tumours which led Cohnheim to form his embryonic theory of the origin of all tumours. In these growths we find striated muscle tissue, cartilage, and adenomatous tissue. The striped muscle fibres are found in one-fourth of all cases microscopically examined. The fibres are more like embryonic striated muscles

[1] *Wien. med. Wchnschr.*, 1897, No. 4; abstract in *Brit. M. J.*, 1897, i. Epitome, p. 92.
[2] *Riv. sper. di Freniat.*, 1897, xxii. 114; abstract in *Brit. M. J.*, 1898, i. Epitome, p. 36.
[3] *Ann. Surg.*, 1897, xxvi. 529.

than the fully-developed tissue. In one case they have even been found in a secondary growth. The adenomatous tissue resembles more the Wolffian body than mature renal tissue. Its presence has led some of the older pathologists to classify these growths as carcinoma.

Secondary growths have occasionally been found in the retroperitoneal and mesenteric glands, but as a rule the lungs and liver are affected. It is an interesting fact that secondary growths are very rare in the ureter or bladder. In some of our English text-books, the other kidney is said to be very often the seat of sarcoma also (in one text-book it is stated that this is so as often as in half the cases); but this statement is not substantiated by the study of the 145 recorded cases, although a few cases of bilateral renal sarcoma are referred to.

The tumours in many cases attain an enormous size, and in several have been more than half the weight of the child after removal of the growth. They are frequently covered with large veins, either emerging from the growth or forming a plexus in the overlying peritoneum. In some cases the soft tumour tissue bursts through the capsule and leads to lobulation of the growth. The kidney is not wholly destroyed in all the cases; in a few it has projected in part or as a whole from the growth, but in no less than twenty was a portion of the kidney found under the capsule of the growth, and in two cases the whole kidney was found beneath the capsule. The appearance of the tumour on section varied greatly. In many cases various forms of degeneration were present; and in a few cysts were discovered, many quite small and associated with the adenomatous growth; but in one case a cyst of very large size was present, and in several there were degeneration cysts of considerable size, or large areas of the growth consisted of extravasated blood and broken-down tumour tissue.

The manner in which these tumours displace the contents of the abdominal cavity is important. A large growth of the right kidney has been known to raise the diaphragm up to the fourth rib. The colon is of course raised by the tumour, but if the growth attains a great size it is pushed inwards as well, and this is particularly apt to occur on the right side, the colon thus forming a line from the cæcum to the splenic flexure. When the colon or other portion of bowel lies on the top of a very large growth it may be so pressed against the abdominal wall that it contains no gas, and hence does not yield a tympanitic note, but may be felt as a thick band rolling under the fingers over the tumour, as was the case in a patient under my own care.

From the point of view of the operating surgeon, the presence or absence of important adhesions is a matter of much moment. Fortunately the proportion of cases with adhesions is not very large, and when they occur they are usually simply peritoneal; any of the neighbouring organs may be adherent

(most frequently the stomach), but it is interesting to note that in only five cases is the vena cava said to have been adherent. In two cases the growth had eroded the vertebræ and caused symptoms of pressure on the cord. A turbid brown fluid in varying amount was usually found in the peritoneum.

The well-recognised symptoms of malignant renal growth were present in these cases of sarcoma in children, and it is important to observe that in the majority the first symptom noticed was the presence of the abdominal swelling; but in a fair number hæmaturia was the first symptom. Vomiting has been present in many cases.

The differential diagnosis of these tumours is carefully considered by Dr. Walker, but the only point that I need refer to is the great difficulty of distinguishing them from malignant growths in the retro-peritoneal glands; but this condition is very rare. When the tumour has been explored by an aspirating needle, only a few drops of bloody serum have been obtained in the recorded cases collected by Dr. Walker; but in a case lately under my own care, after exploration of the growth by an abdominal incision, the needle of an exploring syringe was introduced into it from the loin, and a syringeful of dark-brown clear fluid was obtained. Although the colour of the fluid was unlike that of hydronephrosis, the fact that a syringeful was withdrawn suggested this condition; but a lumbar exploration showed that the mass was sarcoma, the fluid being probably the result of previous hemorrhage into the growth.

These tumours of the kidney are most frequently met with in young children, between one and five years of age.

The result of **removal of the growth** has been very discouraging—so much so, that some surgeons who have studied the mortality statistics have formed the opinion that they had better be left alone. There are only four cases on record in which the child has lived for three years after removal of the growth, *i.e.*, four cases of "cure" according to the three years rule. Two of these are cases operated on by Abbe, of New York, and in one of these the growth was so large as to nearly fill the abdomen. It weighed 7½ lbs., *i.e.* half the weight of the child, after its removal. Microscopic examination showed it to be a sarcoma containing striated muscle fibres. The child was well 3½ years later. The other two cases of "cure" were operated on by two German surgeons, Israel and Schmidt.

The **mortality** statistics collected by various surgeons during the last ten years have varied considerably, but they have all been high—some so high as to place the operation, in the opinion of the surgeons who have brought them forward, outside the range of justifiable surgery. There is one hopeful fact, and that is, that the mortality has diminished of late years. Dr. Walker gives us the mortality as 38.25 per cent. Most of the deaths are from shock. The removal of the growth is said to prolong life from 8.08 (the average duration without operation)

to 16.77 months. He says: "Although the cures are very few, still in consideration of the invariably fatal termination of this malady, without interference, I unhesitatingly advise operation, for it offers the only hope; and at worst it means only an accelerated death." With this I cannot altogether agree. It means the chance of immediate death in about one case in every three operated on; a prolongation of life by some months in those patients who survive; and a so-called cure in only four cases out of 145 recorded. I think it is a matter for the parents to decide whether the child shall incur the risk for the chances offered; and I do not think that nephrectomy could be recommended, except in an early stage when the tumour was quite small.

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Dr. W. B. Coley, of New York, has recorded[1] 250 cases of **radical cure of hernia in children.** Bassini's method was adopted. There was only one fatal case—a child died from pneumonia, due, Coley thinks, to the administration of ether for anæsthesia. He considers that it is a good rule never to advise the operation in children until a truss has been tried for one or two years without benefit; and his 250 cases of operation were selected from 7000 cases of ruptured children under 14 years of age. He raises the important question as to how many persons who have hernia in infancy and childhood remain uncured in adult life? He has collected records of 400 such cases during the last four years in his practice as surgeon to the Hospital for Rupture in New York. He claims that the mortality of operation for radical cure in childhood is less than in adult life, and is as low as half to one per cent. in a collection of no less than 832 cases. He considers that cases of hernia in children are more easily cured by operation than in adults, just as they are by wearing a truss. Many of the cases operated on by Coley have now remained free from recurrence for several years; indeed, out of 280 cases of Bassini's operation which he has been able to trace, in only three has relapse occurred. In fourteen cases the patients were examined four to five years after operation, and no recurrence was found. These cases include adults as well as children.

At a meeting of the New York Surgical Society on April 14th, 1897,[2] Dr. Coley reported a case of double femoral hernia in a male child aged two years. On the right side the cæcum, uncovered by peritoneum on its posterior aspect, was found in the sac. Femoral hernia in children is very rare.

In Bassini's operation for the radical cure of hernia the cord is transplanted on to the surface of the internal oblique, and is still covered by the external oblique aponeurosis; in Halsted's operation the cord is placed on the outer surface of the external oblique. Dr. G. Ryerson Fowler, of Brooklyn, has devised a

[1] *Ann. Surg.*, 1897, xxv. 270. [2] *Ibid.*, xxvi. 246.

new operation for radical cure of hernia, in which he transplants the cord within the peritoneal cavity, by slitting up the posterior (peritoneal) layer of the inguinal canal.[1] He makes the cord emerge from the peritoneum in the position of the external ring, and he attempts to strengthen the wall at this point by trying to drag the rectus muscle over its point of exit. I fail to see that hernia is less likely to occur here than in the position of the internal ring, and do not believe that the rectus can be dragged over the new point of exit of the cord from the peritoneum in the way described. It seems to me that hernia is much less likely to occur if the exit of the cord is left in the usual position, with the external oblique carefully sutured over it. Dr. Fowler has not operated on enough cases, or for a long enough period, to show his results.

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We are all familiar with acute infective inflammation of the long bones and their periosteum in children, but probably few of us have studied the disease which has lately been described by Makins and Abbott[2] and by Chipault[3] as **acute primary osteomyelitis of the vertebræ.** Records of twenty-eight cases of this rare but important disease have been collected. It is essentially a disease of childhood—the larger number of the cases occurred between the ages of ten and fifteen years. The general symptoms are those of an acute infective inflammation of bone, and the local signs are inflammatory induration and tenderness about some definite area of the spine, with the evidence of the formation of abscesses at a later date. When this abscess is opened the bare portions of the spine are discovered. At the commencement of the disease there may be only a tendency to assume the supine posture, with tenderness and rigidity of the affected portion of spine; then œdema may be observed, followed by widespread inflammatory induration, and finally by abscess. If the body of the vertebræ, rather than the neural arch, is affected, the local swelling in the back may not be present, and the pain on movement, rigidity of the spine, and general symptoms of acute inflammatory disease may be all we have to depend upon for diagnosis. The pus may occupy the positions in which tuberculous abscesses from Pott's disease are found — double psoas abscess, for instance, may be produced. If the disease attacks the neural arch, abscess will form in the back; if the body, the abscess will form behind the pharynx, in the mediastinum, or in the psoas muscles, according to the level of the disease. In several cases spinal meningitis has been set up, and Makins and Abbott suggest that acute osteomyelitis has been overlooked as the cause of meningitis in a considerable number of instances of so-called acute spinal meningitis or myelitis, and they state that "in rare cases the first notable

[1] *Ann. Surg.*, 1897, xxvi. 603. [2] *Ibid.*, 1896, xxiii. 510.
[3] *Gaz. d. Hôp.*, 1896, lxix. 1393; abstract in *Med. Chron.*, 1896-97, N.S. vi. 272.

symptoms have been those due to implication of the cord or meninges."

As might be expected, excurvation of the spine was only observed in two cases, and in these disappeared. The lumbar vertebræ are more frequently the seat of this disease than those in the cervical or dorsal regions; and when they are affected on their anterior aspect, pain in, and distention of, the abdomen are often marked symptoms, and may simulate peritonitis. This is probably due to early implication of the psoas muscles, before they become converted into palpable abscess sacs; but it is thought possible that irritation of the nerve-roots and sympathetic ganglia of the abdomen may be to some extent the cause of these symptoms. Vertebral osteomyelitis seems to have been uniformly fatal without surgical treatment, but of sixteen cases so treated eight have recovered. Abscesses must of course be opened early, but they are difficult of detection, even in the back, and much indurated tissue may have to be cut through before pus is reached. Sequestra of the normal arches should be removed. If symptoms of spinal meningitis are present, the spinal canal must be opened up by the removal of diseased or even healthy bone.

CHARLES A. MORTON.

Kraske[1] has published his experiences of the operation which he proposed in 1885 for **cancer of the rectum**. Of 110 cases 80 were subjected to operation. The tumour was more frequently found in the upper portion of the rectum, necessitating the opening of the peritoneum during operation in two-thirds of the cases. The average duration of life of the round-cell form—which is nearly always the type found—must be placed between four and five years. The fact that the subject is not of advanced years is no proof against the existence of cancer, for he has observed it in a man twenty-three years old, and I have had under my care a patient who was only twenty-one years of age. It is of more relative importance to ascertain the degree of mobility of the tumour than to define its upper limit; for opening of the peritoneum is no longer a contra-indication to operation, and, moreover, it is extremely rare to encounter a cancer of the rectum longer than ten to twelve centimetres. The performance of colotomy is only indicated for the relief of complete or impending obstruction, for such cases only drag out a miserable existence with an artificial anus. The high situation of a cancer of the rectum is no contra-indication to operation, for a tumour in the uppermost portion can be removed without difficulty, and the extirpation of a growth situated in the intra-peritoneal portion of the bowel is easier than of one situated lower down, provided that it is freely movable. The thorough evacuation of the contents of the intestines by

[1] *Samml. klin. Vortr.*, Nos 183, 184; editorial in *Ann. Surg.*, 1897, xxvi. 371.

cathartics and enemata previous to operation—often necessitating three or four weeks of treatment—is very important as a preparatory measure, and the author thinks that the failure to properly carry out this preparation is responsible for some of his fatal cases. In operating, the patient is placed on his right side, and the incision now adopted begins at the level of the middle of the sacrum, two or three fingers' breadth to the left of the median line, and runs slightly concave to the left, to the coccyx, running from that point in the median line, and ends a finger's breadth above the anus. The soft parts and the insertion of the sacro-iliac ligaments are divided, and after cutting through the loose fat in the ischio-rectal fossa, the levator ani and coccygeus are divided close to the sacrum and coccyx. Resection of a portion of the sacrum is now necessary, and may be performed with chisel, bone-forceps or chain-saw, after separation of the soft parts in a line concave inward and downward, running from the third left sacral foramen to and around the fourth foramen to the lower angle of the sacrum. Transverse resection of the sacrum, as suggested by Bardenheuer, is only used for the more extensive cases. Rose makes a transverse section of the sacrum at the level of the second foramen, but this Kraske rejects. The attempted modifications in the direction of preservation of the bony structures, by temporary or osteoplastic resection, are founded on better judgment; but the author regards them as more serious and unnecessary, for he has never seen any disturbance of function arise from the separation of the sphincteric insertion to the sacrum, or that the floor of the pelvis has lost its support with a resulting prolapse of pelvic organs. The osteoplastic method will however probably be improved, and the best results may eventually be expected from a combination of this and the original method. The resection of the cancer should begin with division of the bowel below the tumour by opening it transversely, and sutures are placed on the upper cut surface for traction purposes. The patient is then brought into the lithotomy position and the dissection proceeded with. Sometimes the peritoneum can be peeled off the bowel; but if necessary it must be opened, two fingers introduced, the gut pulled down and divided, and the sacral glands removed. Suture of the peritoneum is not to be thought of unless the opening is a very small one. After trying various ways of suturing the cut ends of the bowel, the author has returned to his early method of immediate circular suture, as a successful result is perfectly possible, if a sufficiently careful preliminary treatment has been carried out, and if the bowels are kept constipated for eight or ten days after operation. Packing of the wound with iodoform gauze should be adopted to prevent infection, and need not be removed till it shows a tendency to become loose, about the end of the first week. It is impossible to estimate the direct danger of the radical operation for cancer

of the rectum. Dividing Kraske's cases into two periods,—the first five years when he was evolving the present improvements, and the last seven, we have: 1. Twenty-nine cases, ten deaths, mortality, 34.5 per cent. 2. Fifty-one cases, five deaths, mortality, 9.8 per cent. The average time required for complete closure of the wound was four to six weeks. Excluding two cases of sarcoma, and three of squamous-cell cancer of the anus, observations of fifty-three cases are at hand. Twenty-two cases died of recurrence, with or without metastases, in from six months to twelve and three-quarter years after operation. Sixteen patients died from intercurrent diseases, without recurrence or metastases, from one and a quarter to five years after operation. Fifteen patients are alive and free from recurrence in from three-quarters of a year to eight and a half years after operation.

JAMES SWAIN.

OBSTETRICS.

Sir J. Williams[1] has collected 375 cases of **ovarian tumours in pregnancy**. He showed first that ovarian tumour was not more common in women who were, or had been, than in those who were not, and had never been, pregnant; and moreover that, taking statistics of 1000 cases operated on by Sir Spencer Wells and comparing them with the Registrar General's returns, ovarian tumour was more common in the single than the married both as a whole and between various age limits.

As to the question whether repeated pregnancy increased the liability to ovarian tumours, he showed that more than half the reported cases occurred in the two first pregnancies.

He considers, therefore, that (1) ovarian tumour is proportionately more frequent in the single than the married; (2) ovarian tumour is met with less frequently in each successive pregnancy; (3) a large proportion of cases occurred in primiparæ, and in a large number of cases (83 out of 228) the tumour was present before conception, and that hence we are justified in stating that pregnancy has no influence on the production of ovarian tumour.

He next considered whether gestation gives an impulse to the growth of a tumour already present. He showed that as a rule the rate of growth was hastened by pregnancy only in a small number of cases, in some of which the increased rapidity could be attributed to accidental circumstances.

Next, as to the influence of delivery on the rate of growth, he showed that any direct influence caused by delivery in promoting growth of these tumours did not appear to be the rule.

The influence of the tumour on pregnancy, on the other hand, is

[1] *Brit. M. J.*, 1897, ii. 102.

marked, abortion or premature labour occurring in about 19 per cent.; while various accidents, such as twisting of the pedicle, rupture of the cyst, hemorrhage into and suppuration in the cyst, may be caused by gestation.

The part played by the growth in labour is mainly mechanical: a large growth impedes the auxiliary forces and interferes with cardiac and respiratory action if situated in the abdomen, while if situated in the pelvis it presents a formidable obstacle to delivery, and is the chief cause of the high mortality (25 per cent.) following this complication. The diminution of the enormous mortality can only be effected, in his opinion, in two ways: (1) by the removal of the tumour during pregnancy or labour; (2) by Cæsarean section. Small tumours not occupying the pelvis, and those capable of being pushed up into the abdominal cavity, might be left, and would probably cause few symptoms; all others should be operated on, and Cæsarean section reserved for cases in which the tumour was found to be impacted in the pelvis by strong adhesions.

Austin Cheney[1] reports a case of double ovariotomy during pregnancy, and remarks, in opposition to Williams, that the effect of pregnancy on the tumour is to cause rapid growth, especially when the cyst is small and pelvic in origin. He mentions that Remy states that in 321 cases collected by him, abortion occurred 55 times. This is a higher proportion than that given by Williams. At the same time, he states that the existence of an ovarian tumour with pregnancy is of comparative rarity, and remarks on the dangers to the patient caused by accidents to the tumour, and also from intestinal obstruction caused by pressure.

He points out the risks arising from traction on the pedicle and stretching of adhesions. He quotes Gordon's[2] collection of 204 ovariotomies at different periods of gestation: in 21, where the mothers all recovered, the influence on labour is not stated; in 7 cases the uterus was injured, causing death twice.

Of the remaining 176 cases, 93.2 per cent. recovered, and 6.8 died: in 69.4 per cent. labour took place at term, while in 22 per cent. premature labour followed the operation; but as premature termination of pregnancy occurred in 17 per cent. of the cases quoted by Remy, and in 12 per cent. of those quoted by Williams, when no operation was performed, the tendency to miscarriage after operation does not seem so serious; while if to this is added the enormous fœtal mortality of cases not operated on, the chances of a normal labour at term and of a living child are greatly increased by operation and removal of the growth during pregnancy. As compared with the results either of unassisted labour, or labour where various obstetric operations have to be performed to effect delivery, the mortality after ovariotomy during pregnancy is not so much higher than

[1] *Am. J. Obst.*, 1897, xxxv. 265.
[2] *Centralbl. f. Gynäk.*, 1894, xviii. 566, quoted by Cheney.

that in the non-pregnant condition as to make us consider the operation one of very great risk: Gordon reports a mortality of 6.8 out of 204 cases operated on.

The author narrates an interesting case in which a patient treated for abortion had an ovarian cyst of each ovary; after curetting, she became pregnant, and was operated on during the fifth month of pregnancy and both the tumours removed, a good recovery following. On examination, the larger tumour, which a fortnight before the operation was as large as an adult head and had diminished in size by the date of the operation, was found to have a minute orifice in its wall, through which fluid had escaped into the abdominal cavity. The cyst was papillomatous. The patient went to term and was delivered of a living male child, weighing twelve pounds. Delivery was assisted by forceps to prevent injury to the abdominal scar.

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The **obstacle to labour caused by** the presence in the pelvis of **an ovarian tumour** is one of the most serious complications with which the accoucheur can be confronted,—the mother's life being endangered, firstly, by the prolongation of delivery, the risk of rupture of the uterus, and the certainty of serious pressure on the tissues in their normal situation; and secondly, by the risks produced (even when delivery is possible) by the pressure of the fœtus on the tumour, with the possibility of its bursting and discharging its contents into the peritoneal cavity; of its subsequent sloughing from prolonged pressure, or of suppuration of its contents after injury. The death of the fœtus from prolonged uterine action is also very probable, as is the necessity for its destruction by sacrificial operations. Tumours occupying this position are very likely by their pressure on the rectum to cause damage by bruising the walls of the bowel, and subsequent bacterial infection by the bacterium coli, with the possibilities of peritonitis or suppuration in the tumour, if cystic.

The same subject is very fully dealt with by McKerron,[1] who has collated a large number of cases of this complication. He directed his attention solely to those cases where the presence of the tumour was detected after the onset of labour, and the tumour was found to occupy the pelvic cavity. The results of his investigations are very striking, the mortality following this complication being no less than 31 per cent. in all recorded cases. The mortality has, however, diminished very largely during the last twenty years: 48 cases of this complication have been recorded, with a maternal mortality of 6, or 12.5 per cent., and a fœtal mortality of 36 per cent. The diminution of the mortality in the case of both mothers and children is nearly the same, and although one would at first sight attribute this to improved antiseptic measures, this is only likely to affect the maternal

[1] *Tr. Obst. Soc. Lond.*, 1898, xxxix. 334.

mortality, and the diminution of the fœtal mortality should evidently be more properly referred to the earlier commencement of appropriate treatment. He shows that in 34 of the later cases the duration of labour averaged 24 hours; while of 70 of the 135 earlier cases the average duration was 40 hours, showing the advantage of the abandoning of the expectant plan of treatment. Rupture of cyst occurred in 15 cases, death resulting in 9; of 5 cases in which spontaneous rupture of the cyst occurred, 2 were fatal; in 3 cases rupture occurred during reposition, with 2 deaths; in 1 case during vaginal examination, with a fatal result; in 4 cases during extraction by forceps or version, all of these were fatal; and in 2 during craniotomy, with 1 death.

A certain amount of interest attaches to the rate of mortality in patients suffering from each particular variety of tumour, thus:—

	Cases.	Deaths.	Rate per cent.
Tumours described as cystic ...	49	10	20
" " colloid cysts	3	1	33
" " dermoid	46	18	39
" " malignant	3	3	100
" " carcinoma	5	4	80
" " fibroma	5	4	80
" " fibro-cyst	1	1	100
" " cysto-sarcoma	1	1	100

Rupture of the cyst occurred 8 times, with 3 deaths. The duration of labour averaged between 40 and 50 hours in 7 of the fatal cases in which it is recorded and 1 is recorded as "very protracted." In 11 cases which recovered, the duration of labour averaged between 20 and 25 hours. Hence, of cases where labour was terminated by the natural powers, the mortality would appear to be greater in dermoids than in cystic tumours, to be in direct ratio to the duration in time, and to be seriously complicated by rupture of the cyst.

Thirty-five cases occurred in which labour was left to the natural powers; of these, 19 are described as cystic, 1 as a colloid cyst, 6 as dermoids, 2 as carcinoma, 2 as malignant. Of the 19 cases in which the tumour is described as cystic, 4 died, or 21 per cent.; of the 6 described as dermoid, 3 died, or 50 per cent.; both those described as malignant ended fatally, as did one of the two described as carcinoma. Forty-one cases are described where reposition was effected before delivery, and of these 6 died; but 3 of these deaths were due to other causes. Forty-three cases were treated by puncture or incision; 7 of these died. The tumour is described as dermoid in 3; in 1 of the cases death was due to eclampsia, so that being excluded, the mortality appears to be 6, or 14 per cent. Seventeen cases were treated by version—of these 6 died, or 30 per cent.; and 14 were delivered by forceps, and of these 8 died, or 57 per cent.;

in 4 of these rupture of the cyst occurred, and in 1 twisting of the pedicle. Eighteen cases were treated by craniotomy; of these 8 died, or 44 per cent. Three of the cysts were dermoid, 1 a fibroma, and 1 malignant. Ten cases were delivered by Cæsarean section; of these 8, or 80 per cent., died; but it should be noted that the 2 recoveries occurred in cases operated on since 1894. Three of the cysts were dermoid, 2 were fibromata, 1 a cysto-sarcoma, 1 a colloid cyst, and 1 carcinoma. Two cases were treated by abdominal ovariotomy, both recovered; and 3 by vaginal ovariotomy, and all recovered; in 1 of the cases of abdominal ovariotomy the cyst was found to be colloid, and in 1 of the cases of vaginal ovariotomy, a cystic adenoma was found.

Hirst,[1] reports a case of obstruction of labour by a dermoid cyst in the pelvis. He saw the patient after she had been in labour more than 4 days, and found on examination the whole pelvis blocked by a firm tumour, so that there was not room to pass a finger between the symphysis and the tumour; he found it impossible to displace the tumour, and performed Cæsarean section; he then found it necessary to remove completely the uterus, which was in a gangrenous condition, and the tumour, which proved to be a dermoid cyst of the ovary. Mother and child both did well.

McKerron shows that although the mortality of the later cases has markedly diminished, it is still appallingly high. Reposition of the tumour should always be attempted where possible, but forcible efforts should be avoided. Should reposition fail, the most successful method of treatment, except in the hands of skilled operators, will be found to be puncture or incision; the danger of general peritoneal infection is always present, however, but with modern methods is much less, especially if the cyst walls after incision are sutured to the vaginal wall. Forceps and version should be abandoned altogether, since the mortality with these methods is only less than that of Cæsarean section; craniotomy should not be depended on, as it is subject to the same objections. Cæsarean section appears from the table to be a most fatal procedure, but the mortality of this operation, even when uncomplicated, was extremely high up to 1876, and may be expected in the future to give a much larger number of successes; the last 3 cases recorded, 1 in 1889 and 2 in 1897, all recovered.

The removal of the obstacle by abdominal section has been tried but seldom; the results, however, seem to promise well in the few cases recorded, and are likely to be superior, if the operation is undertaken before exhaustion has occurred, either to those of leaving the case to nature, or to those of puncture or incision.

Vaginal ovariotomy also has been tried in only 3 cases,

[1] *Am. J. Obst.*, 1897, xxxv. 790.

but the successful result of these is encouraging; there seems no good reason why further successes should not attend the use of this method. The importance of early treatment and the necessity for distrusting the natural powers cannot be too strongly insisted on.

* * * *

Gottschalk[1] states that it is becoming comparatively rare to meet with **ovarian tumours in the puerperal state,** owing to the greater readiness with which ovariotomy is performed nowadays, on the discovery of the tumour during pregnancy, and that only those cases in which the tumour has escaped notice during pregnancy come under the care of the surgeon during the puerperal state—that is, excepting those in which the tumour has been purposely left. The fatality attending the old methods of treatment can be traced, either directly or indirectly, to septic changes in the cyst and its contents, or to rupture of the cyst.

Remy[2] lost 24 women out of 52 cases of rupture. Suppuration and decomposition in the cyst are most frequent after puncture, owing to the introduction of septic matter with the trocar. Undisturbed pregnancy, parturition, and childbed probably only occur in those cases where the tumour is small or of medium size, its walls thick, and its rate of increase only slow. Now, the question is, granted that pregnancy, parturition, and childbed have been uneventful and to all appearances normal, what is the condition of the tumour, and how is it affected by these processes apart from the obvious clinical manifestations, such as rapid growth, and other gross pathological changes?

The gynæcologist learns on the operating table that these apparently normal and undisturbed processes, parturition, etc., before mentioned do not pass without serious alterations in the condition of the tumour.

Löhleim[3] found in 1 case out of 7 he reports that adhesions to intestine were so strong that he was compelled to content himself with partial resection of the cyst, and the enclosure of the remainder in the abdomen. Twisting of the pedicle is very frequent in childbed, due partly to the sudden lowering of intra-abdominal pressure by the rapid evacuation of the contents of the uterus, and partly to the return to its normal position of the deflected uterus, which, apart from the presence of any tumour, tends to be slightly twisted on its long axis.

Suppuration in the cyst, apart from puncture, is another fertile cause of trouble, and by leading to peritonitis may easily cause a fatal result.

He considers that in general, pregnancy and parturition have a bad effect on ovarian tumours in the ways named, and he thinks that trouble nearly always arises during the puerperal

[1] *Samml. klin. Vortr.*, 1898, No. 207.
[2] *Thesis Agr.*, Paris, 1886, quoted by Gottschalk.
[3] *Ztschr. f. prakt. Aerzte*, 1896, v. 199; quoted by Gottschalk.

period if these complicate pregnancy and labour. Other observers do not attach such importance to this complication. Dakin[1] and Williams[2] both state that if small and not in the pelvis, they may be left with safety; bad results should always be anticipated if labour occurs in a case where the tumour is large, low enough in the abdomen to deflect the presenting part, or small and in the pelvic cavity.

WALTER C. SWAYNE.

Reviews of Books.

William Harvey. By D'ARCY POWER. Pp. xi., 283. London: T. Fisher Unwin. 1897.

This is one of the "Masters of Medicine" series, the introductory volume of which we reviewed in March. Everything has been done to make the record of the life of this truly great man as complete as possible; and although the material at the author's disposal was somewhat scanty, yet we have a consecutive and very readable biography supplemented by well-chosen extracts from Harvey's works. The authorities are enumerated in an appendix and there is a good index.

Our admiration for the indomitable energy and patience which led to the discovery and promulgation of the method of the circulation of the blood is much increased by this book; and the grace and tact which made Harvey so good a courtier, as well as the skill and learning which made him so eminent a physician, are well brought out.

It is interesting to note the strict conditions by which a physician to St. Bartholomew's Hospital was bound early in the seventeenth century; and the charge read to the applicant for such a post is full of solemnity. Whatever we may think of our profession now, it is certain that it was in those days considered a high one, and the duties of the hospital staff were honoured and sacred. It is needless to say that Harvey fulfilled these conditions during his tenure of office. He was a good Latin scholar, and made his notes in that language or in English, as if he thought equally well in either; and this sometimes led to comical results, such as the following example: "Exempto corde, frogg scipp, eele crawle, dogg Ambulat"; truly an instance of "dog Latin."

As is well known, Harvey's doctrines were strenuously opposed by many, and it required very firm convictions to enable a man to persevere as he did. His struggles to make

[1] *Handbook of Midwifery*, 1897. [2] *Loc. cit.*

his researches known are admirably told by Mr. D'Arcy Power. Everyone who is interested in the heroes of medicine should study this book.

Pasteur. By PERCY FRANKLAND, Ph.D., F.R.S., and Mrs. PERCY FRANKLAND. Pp. 224. London: Cassell and Company, Limited. 1898.

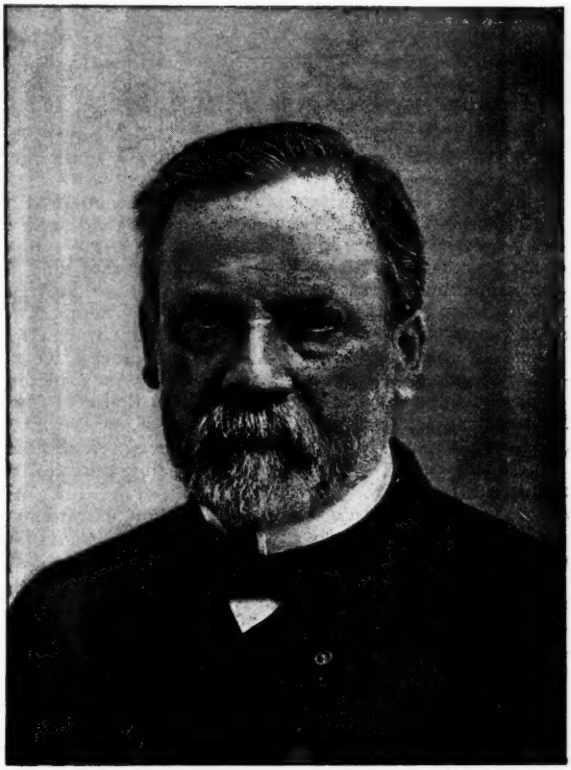
The Pasteur Memorial lecture delivered on March 25th, 1897, by Prof. Frankland before the Chemical Society is here reproduced, with such alterations and additions as are necessary for a less technical audience; and the result is a volume of surpassing interest, which no one unacquainted with the details of the marvellous career of Louis Pasteur can afford to leave unread.

It is a matter of congratulation that the task of compiling this brief biography was placed in the hands of one so competent to deal with both the chemical and the biological aspects of Pasteur's work as Prof. Frankland. After a few pages devoted to the subjects of parentage and birthplace, the reader is made acquainted in successive chapters with the essential features of the various lines of research so successfully exploited by the illustrious subject of the lecture. Commencing with the initial discovery of the connection of molecular structure with optical behaviour, the transfer of Pasteur's energies to the investigation of fermentation phenomena, as a consequence of the observation of the very different action of ferments upon the chemically similar substances that had hitherto occupied his attention, is lucidly described: then follow the well-known researches on vinegar, and the diseases of wine and beer, with the first excursion into the domain of animal pathology in connection with the diseases of the silkworm. From this point the investigation of infectious diseases naturally followed, and led directly to the discovery of the "vaccines" for fowl cholera and anthrax, and ultimately to the crowning achievement of all, the protective inoculation against rabies.

An account of the closing scenes of this long and laborious life, and of the present constitution of the Institut Pasteur, bring this volume of "The Century Science Series" to a close; and we feel sure that our readers will be glad to have a portrait of the distinguished subject of this memoir, which the courtesy of the editor of the *British Medical Journal* enables us to give.

The general impression left by a perusal of this appreciative sketch is that Pasteur's pre-eminence was largely due to an almost unique combination of unbounded power of speculation with an unrivalled capacity for close and accurate experimental work. Enthusiastic visionaries are plentiful: careful and painstaking investigators, if not so numerous, are to be frequently met with: but the union of the faculty for taking a comprehensive view of

all possible explanations of a novel phenomenon with the power of concentrating all the mental and physical energies upon the proof or disproof of the selected theory is likely to be as rare in



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très distinguée
L. Pasteur

the future as it has been in the past. In addition, moreover, to this rare combination, Pasteur appeared on many occasions to select the correct point for experimental attack by virtue of an

instinctive insight of which he could not, or at least did not, give a logical account. Whether these happy inspirations were, as suggested by Dr. Frankland, pure luck, or were the outcome of a delicate weighing of probabilities possible only to the intellect of "le grand maître," is a question for each reader to decide for himself.

Human Anatomy. By JOHN CLELAND, M.D., F.R.S., and JOHN YULE MACKAY, M.D. Pp. xx., 833. Glasgow: James MacLehose & Sons. 1896.

We looked forward with some interest to the publication of this book; for, coming from such a school and written by such authors, everything augured in its favour. We are afraid we expected too much; at all events, we thought that this book would be a distinct improvement on such works as Morris and the classic Gray, but we are bound to express disappointment. There is perhaps no section in the book which excels any corresponding one in the works alluded to; indeed, we think there is not one which equals the others. As a record of Professor Cleland's work the book is without doubt of interest to the teacher; but we doubt if the student, whose mind is occupied rather with the problem of passing examinations, will appreciate much of the very interesting personal work mentioned here.

We do not propose to criticise each section, but we would express the opinion that those dealing with the bones and with the abdominal viscera are distinctly below the level one could reasonably expect in such a work. As to the section on bones, we may say that it is exceedingly difficult to read, and so wanting in good plates that the junior student must find himself in a hopeless state and in sheer desperation resort to some other work; and in speaking of good plates, drawings, etc., we cannot refrain from saying that the majority of the original illustrations are at least disappointing—many of them, even to the practised eye, being almost undecipherable, though to the same eye they give evidence of representing most excellent preparations, and they shew many original views of situations. They are a very sorry contrast to the magnificent illustrations borrowed from Testut.

In the section dealing with the abdominal viscera we notice with regret that the later ideas as to the supposed true shape of the viscera are practically ignored. This we think is a grievous omission; for whatever be the intrinsic merits of the views at present held by the majority of anatomists concerning the viscera, the fact that such views are held by such men at least warrants that they should have a place in a book which is apparently a student's text-book.

The Vertebrate Skeleton. By SIDNEY H. REYNOLDS. Pp. xvi., 559. Cambridge: At the University Press. 1897.

This is one of the "Cambridge Natural Science Manuals," and is written by a lecturer at University College, Bristol. It consists, briefly, of the following: first come short chapters on the lowest members of the vertebrate phylum, on the various elements of the skeleton, and on the classification of the vertebrate groups. Each group is then taken in turn, an account is given of its general skeletal characters, the skeleton of one or more selected types is described in detail, and lastly the variations throughout the group are pointed out organ by organ. It is, then, like the other books in this series, essentially a practical treatise, intended for use by the student in the laboratory to help him in making his knowledge a real one and as objective as possible. It is a good example of the modern English teaching of biology, which we owe in so large a measure to Professor Huxley.

Lectures on Physiology. First Series.—*On Animal Electricity.* By AUGUSTUS D. WALLER, M.D., F.R.S. Pp. viii., 144. London: Longmans, Green, and Co. 1897.

In these lectures the method of experimenting on frog's and mammalian nerve and the graphic record of the results are dealt with in a clear and interesting manner. Professor Waller points out how infallibly the galvanometer responds to the condition of the nerve, whereas the contraction of muscle does not always express this faithfully. Using the photographic record of the galvanometer, he details most instructive experiments to show the effect of carbonic acid gas, alcohol, tobacco smoke, etc. on the vitality of the nerve. He shows that nerve is peculiarly sensitive to CO_2, which favours and facilitates nerve action, and suggests that the CO_2 formed during the disintegration of nerve-matter may possibly be reinvolved in some combination which may be stored up for future use, *e.g.* the nerve-fat.

Teachers and students of physiology should be thankful to Dr. Waller for his clever demonstration of polarisation currents and for his lucid explanation (aided by a good diagram on p. 109) of Matteucci's doctrine that these currents are essentially electrolytic. Except in lectures v. and vi., where we are brought into deep waters, everything in this small book is made quite clear to the careful reader; and this is high praise when we consider the intricate nature of the problems involved and the difficulty of experimenting.

The Physiology and Pathology of the Cerebral Circulation. By LEONARD HILL, M.B. Pp. xvi., 208. London: J. & A. Churchill. 1896.

In these pages we have the records of an extensive experimental research in the above branch of physiology, and also a summary of the previously recorded work of others. The author describes with lucidity the numerous and varied experiments he has made in the attempt to shed light upon the problem of the cerebral circulation. That he has exercised great care and ingenuity in devising and performing these experiments, many of which were delicate and complicated, is obvious, and the conclusions he has drawn from them appear to be fully justified. The mutability of physiological and pathological doctrine has been so frequently illustrated in the past that we are compelled to approach new theories and explanations of phenomena in these sciences with extreme caution. We anticipate however that future investigation will confirm many of the author's conclusions. It is impossible here to more than allude to one or two of Mr. Hill's researches and views.

In the section upon the cerebro-spinal fluid he points out the impossibility of maintaining that fluid in a state of higher pressure than that of the blood in the veins and sinuses of the meninges, for the fluid easily passes into these vessels when its pressure is greater. This fluid cannot therefore transmit increased pressure, except for a very brief period.

In no experiment has the author discovered evidence of nervous vaso-motor control of the intra-cranial vessels. In all his experiments, changes in the cerebral circulation appeared to passively follow the changes in the general arterial and venous pressures. It is a little hard to believe that the vessels in the cranium, peculiar as their situation is in a rigid cavity of unalterable size, differ so fundamentally from the extra-cranial vessels in this respect. The researches upon the effect of gravity on the circulation are very interesting. If the splanchnic vaso-motor constrictors be paralysed and the head then raised, syncope results. This is recovered from if the head be lowered. The blood in fact, under these circumstances, passively obeys gravity. Excessive inhalation of chloroform tends to paralyse the splanchnics. Hence the importance of keeping the head low in such anæsthesia.

In the sections on cerebral anæmia and cerebral compression it is shown that the culminating symptoms and the mode of death are the same in each case. Death results when the bulbar circulation ceases. Usually the respiratory centre is paralysed before the vaso-motor. Though the functions of the brain can be performed under any pressure from zero to 50 mm. Hg, yet if the cause which increases or decreases pressure also

produces anæmia of the bulb to a considerable degree, the vital centres are paralysed.

We can unhesitatingly say that the volume before us, the outcome of a vast amount of experimental work, materially advances the study of the branch of physiology with which it deals, and merits the most careful attention of all scientific physicians and surgeons as well as of physiologists.

A System of Practical Medicine by American Authors. Edited by ALFRED LEE LOOMIS, M.D., and WILLIAM GILMAN THOMPSON, M.D. Vol. II.—*Diseases of the Respiratory System—Diseases of the Circulatory System and the Mediastinum—Diseases of the Blood—Diseases of the Kidneys—Diseases of the Bladder and Prostate Gland.* Pp. 5—11, 19—941. London: Henry Kimpton. 1897.

In the opening portion of this volume Dr. S. Edwin Solly gives an outline of the diseases of the nose, naso-pharynx, and larynx. As regards tuberculosis of the larynx, he points out that "the danger of tuberculous laryngitis lies not so much in the difficulty in curing the local disease, as in the fact that it is almost invariably allied with a tendency to the general dissemination of tubercle with an absence of self-limitation;" he believes that in nearly all instances it is a secondary infection from a thoracic deposit, and that the infiltration takes place as a rule in the submucous tissues, ulceration occurring subsequently. He states that "early recognition and appropriate climatic change, with local treatment, have a very marked influence on the prognosis," but he has not thought it worth while to mention any general medicinal treatment.

Dr. Elbridge G. Cutler writes on the physical signs of pulmonary disease, hæmoptysis, physical signs of cardiac disease, cardiac atrophy, cardiac failure, acute and chronic myocarditis, and the fat heart. We are a little surprised to find it said that "auscultatory percussion has been advised for determining the cardiac boundaries, but it does not seem to present any advantages over the ordinary methods, and is not, therefore, recommended to the general practitioner." We do not discover any especial mention of Sansom's plexímeter, which certainly does give a more accurate means of estimating the area of heart-dulness than can be obtained by the finger, nor do we find any mention of the use of the Röntgen rays for estimating the varying sizes of the heart under different conditions: we hope that a future edition of this volume will give us more modern and improved methods for estimating the effects of treatment on the size of the heart. Schott has found

that the fluorescent screen may be made to give important information, and the combined auscultation-percussion method has been found to be fairly trustworthy.

Dr. Herbert B. Whitney writes on non-tubercular diseases of the pleura, and he comments fully on the fact that at least forty per cent. of all individuals with sero-fibrinous effusion will eventually develop tuberculosis, and further that the results of inoculation and *post-mortem* examination confirm the belief that even a larger proportion of such pleurisies are of genuinely tubercular character, The presence in a purulent effusion of certain micro-organisms differentiates the sero-fibrinous from the purulent pleurisies, and these latter are grouped in accordance with the individual special organisms, as follows:—(1) Streptococcus pyogenes; (2) The pneumococcus of Fränkel; (3) The bacillus tuberculosis; (4) Saprophytic germs.

The section on the examination of the blood is the joint work of Dr. F. C. Shattuck and Dr. Richard C. Cabot, and is well up to date inasmuch as it is the work of pioneers in this field. The use of Daland's hæmatocrit is said to diminish greatly the tedium of counting the corpuscles, inasmuch as with this centrifuge "a count is usually done in two minutes." The specific gravity method as devised by Roy and modified by Lloyd Jones does not appear to have been in favour, as it is not mentioned by the authors: we have found this method to be of comparatively easy application and quite as trustworthy or more so than the hæmacytometer of Gowers. The different varieties of leucocytes are indicated by the Ehrlich-Biondi method, the triple stain bringing out the characteristic points, whilst the erythrocytes are stained yellow. This article is illustrated by a series of coloured plates, somewhat resembling those which are to be found in Dr. Cabot's excellent monograph.

The first portion of diseases of the kidneys is by Dr. Henry P. Loomis, and it comprises nephritis, with amyloid degeneration, and renal hyperæmia. He defines Bright's disease as a bilateral hæmatogenous non-suppurative nephritis, and states that all nephritis can be divided into two great divisions—acute and chronic diffuse nephritis, the former generally ending in recovery, the latter always in death—the former being comparatively rare, the latter very frequent. "The writer has been especially impressed with the fact that a very large proportion of the patients who give no renal symptoms yet have albumin and casts in the urine," and "it is the exception to find kidneys in persons over forty years of age which will show *under the microscope* even a relatively normal structure."

An outline of uræmia, by Dr. Thomas D. Coleman, brings this interesting volume to a close; and we hope that the Editor will be able to continue the good work already done, and that volumes iii. and iv. will quickly follow the excellent volumes which have already been issued.

Clinical Manual of Mental Diseases. By A. CAMPBELL CLARK, M.D. Pp. 484. London: Baillière, Tindall and Cox. 1897.

When such excellent manuals on insanity as those written by Clouston and Blandford are obtainable, we are at loss to understand why this book should have been published, and the reason for its production as set forth in the preface seems hardly sufficient. With unimportant exceptions, there is but little information which is not to be found in the manuals just mentioned, and expressed in a less pretentious manner.

It is certainly satisfactory, however, to note that Dr. Clark has considered the importance of a chapter on mental physiology, and that he has been at especial pains to elucidate the frequently obscure terms, illusion, hallucination, and delusion. It is not stated with sufficient clearness that an illusion depends upon the peculiar circumstances under which the object is presented, and not upon a faulty process of sense-perception. We do not like the term "insane illusion"; if an illusion cannot be dispelled by means sufficient for presumably normal minds, "delusion" is the proper nomenclature.

In reference to the theory of sane evolution and insane dissolution, we hold with Dr. Clark that there is no reason to expect invariably a regular unfolding in reverse order to acquisition. If, indeed, we accept a physical basis of degeneration, then it is probable that this may proceed at the same time on different planes. But the illustration used—that of the hoarding habits of the early general paralytic—does not appeal to us; the lines of commencing dissolution are too much modified by previous high developments of conduct to be compared with the acts of a boy governed by simpler motives. These habits are very likely based upon entirely different and even still complex reasonings; and do not signify a sudden retrograde plunge into early periods of development.

The lengthy *résumé* of Dr. Francis Warner's investigations into the backward and feeble-minded appears out of place in a clinical manual. This however, together with synopses of somatic insanities, undoubtedly brings the book up to date.

What we have most to complain of in the author's work is the frequently involved style of writing. In a clinical manual, when attempts at vivid description are made, terseness and lucidity should not be sacrificed. But here the meaning which the author seeks to convey is continually clouded by a choice of florid language, out of place in a work dealing with an already complex subject. By extreme tautology and a wearisome indulgence in metaphor, he succeeds often in obscuring descriptions which might otherwise have been graphic enough. Pages 19, 20 will furnish an instance of Dr. Clark's literary style—a paragraph of sixteen lines contains eleven distinct sentences and about twenty propositions; and an example of careless

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An outline of uræmia, by Dr. Thomas D. Coleman, brings this interesting volume to a close; and we hope that the Editor will be able to continue the good work already done, and that volumes iii. and iv. will quickly follow the excellent volumes which have already been issued.

Clinical Manual of Mental Diseases. By A. CAMPBELL CLARK, M.D. Pp. 484. London: Baillière, Tindall and Cox. 1897.

When such excellent manuals on insanity as those written by Clouston and Blandford are obtainable, we are at loss to understand why this book should have been published, and the reason for its production as set forth in the preface seems hardly sufficient. With unimportant exceptions, there is but little information which is not to be found in the manuals just mentioned, and expressed in a less pretentious manner.

It is certainly satisfactory, however, to note that Dr. Clark has considered the importance of a chapter on mental physiology, and that he has been at especial pains to elucidate the frequently obscure terms, illusion, hallucination, and delusion. It is not stated with sufficient clearness that an illusion depends upon the peculiar circumstances under which the object is presented, and not upon a faulty process of sense-perception. We do not like the term "insane illusion"; if an illusion cannot be dispelled by means sufficient for presumably normal minds, "delusion" is the proper nomenclature.

In reference to the theory of sane evolution and insane dissolution, we hold with Dr. Clark that there is no reason to expect invariably a regular unfolding in reverse order to acquisition. If, indeed, we accept a physical basis of degeneration, then it is probable that this may proceed at the same time on different planes. But the illustration used—that of the hoarding habits of the early general paralytic—does not appeal to us; the lines of commencing dissolution are too much modified by previous high developments of conduct to be compared with the acts of a boy governed by simpler motives. These habits are very likely based upon entirely different and even still complex reasonings; and do not signify a sudden retrograde plunge into early periods of development.

The lengthy *résumé* of Dr. Francis Warner's investigations into the backward and feeble-minded appears out of place in a clinical manual. This however, together with synopses of somatic insanities, undoubtedly brings the book up to date.

What we have most to complain of in the author's work is the frequently involved style of writing. In a clinical manual, when attempts at vivid description are made, terseness and lucidity should not be sacrificed. But here the meaning which the author seeks to convey is continually clouded by a choice of florid language, out of place in a work dealing with an already complex subject. By extreme tautology and a wearisome indulgence in metaphor, he succeeds often in obscuring descriptions which might otherwise have been graphic enough. Pages 19, 20 will furnish an instance of Dr. Clark's literary style—a paragraph of sixteen lines contains eleven distinct sentences and about twenty propositions; and an example of careless

expression may be taken from page 190—"Homicidal impulse is often an immediate sequel of sexual disturbance—menstruation, masturbation, or sexual excess . . . the man who has done the deed seems oblivious." We imagine that the case of a man having homicidal impulse after menstruation is rare. There are, in fact, a serious number of inaccuracies and solecisms of style and grammar to be found in this work.

It is to be regretted that an antiquated system of photographic illustrations of various insanities should have been revived; they are for the most part, though well produced, not happily chosen. One of the illustrations constituting the frontispiece is in strikingly bad taste; it is surely at variance with the purpose of an intentionally serious work that one should find at the commencement a picture of an obviously sane man, wearing an impossibly false wig and beard, crouching behind an elaborately arranged bundle of straw.

Diseases of the Spinal Cord. By BYROM BRAMWELL, M.D. Third Edition. Pp. xii., 659. Edinburgh: William F. Clay. 1895.

It is hardly necessary to review at length the third edition of a book so widely and so favourably known as Dr. Byrom Bramwell's *Diseases of the Spinal Cord*,—one, too, that has been translated into three languages. As was inevitable in view of the growth of our knowledge with regard to nervous diseases, a considerable extension of the book has been made in this edition. It appears to us to have been brought thoroughly to date, and the abundance and excellence of the illustrations, more particularly the clinical ones, deserve special mention. Such clinical pictures of disease are especially valuable to the student. The leading characteristic of the work is its eminently practical character, and the author's experience in, and aptitude for, teaching enables him to put his subject-matter in a particularly clear and attractive form, so that the student and practitioner will find the book a useful guide. In this edition the text is arranged in the form of lectures. We have no doubt that it will meet with the same favour that has been accorded to the former editions. It is only right to call attention to the clearness of the type in which the book is printed.

Abdominal Surgery. By J. GREIG SMITH. Sixth Edition. Edited by JAMES SWAIN, M.S., M.D. Two vols. Pp. xiii., 1—576, xii.; x., 577—1171, xxvii. Bristol: J. W. Arrowsmith. 1897.

The fifth edition of this work was published in 1896, and within a year it became necessary to issue a sixth. The author requested his colleague, Dr James Swain, to relieve him of the labour of bringing out the new edition, scarcely a hundred pages

of which had been prepared when the master-hand was called away and the remainder of the work was entirely undertaken by Dr. Swain. We have little doubt that as it now stands the book will remain for many years the standard text-book of abdominal surgery. Advances in this subject are doubtless continually being made, and year by year we see alterations and improvements in diagnosis and technic, but the broad principles here enunciated will certainly remain as a memorial of the earnest worker and original thinker who has brought them into a compact form so easy of reference.

The early sections are devoted to the subject of abdominal operations generally considered. The author was one of the first to point out that ovariotomies and other delicate abdominal operations could be successfully performed in general operating theatres. He acknowledges that there is an *a priori* probability of the greatest success being obtained in specially designed hospitals fully under the control of one surgeon, but he considers that extra care in avoiding all matters conducive to septicism justify their being carried out either in general hospitals or in private dwellings.

The section on ovariotomy is one of the best in the book. An interesting account is given of the early history of the operation. Due credit is given to Ephraim McDowell as the first ovariotomist, and the claims of Houston of Glasgow are at once put aside. The labours of other American surgeons to improve the operation are duly acknowledged, while the work of Spencer Wells, Thomas Keith, and Knowsley Thornton receives full recognition.

The chapters treating of operations for ectopic gestation have been carefully brought up to date. The author holds with Lawson Tait that all extra-uterine conceptions are at first tubal, and that further varieties are produced after rupture of the primary tubal sac and escape of the ovum. He urges early and prompt operation in almost all cases. He points out that treatment by electricity is only suitable in the early stages, but it is not always successful, it is not free from danger, and, in its limited application, it enters into competition with cœliotomy in the same field where the latter is most successful in primary results, and has also secondary results which are absolutely perfect.

Section VI. treats of operations on the stomach, and in the account of the operation of gastrostomy the author very wisely does not attempt to describe all the numerous modifications of the operation which have been brought forward from time to time by different surgeons, but has contented himself with describing fully the operation he himself preferred and has then given a short account of three other methods, viz., Witzel's, Frank's, and Paul's. Greig Smith had himself met with a somewhat unusual amount of success in his operations of gastrostomy, and his description of the details of his method and his simple

means of avoiding leaking of the aperture are worthy of close study. It is very doubtful if any of the complicated methods often advocated are any improvement upon the simple procedure here recommended.

Operations on the intestine are fully dealt with, and the different means we possess of uniting divided bowel are copiously illustrated. The author was never very partial to the Murphy button, but preferred a method by simple suture wherever the bowel was sufficiently healthy and the patient in good condition. Excellent descriptions are given of the best means of clamping and holding the bowel and of inserting the sutures, and sound rules are formulated for choosing a particular operation for a particular case.

We naturally look to the chapters on the general principles for operation in cases of intestinal obstruction, for the author had well-known and strong views on the best methods of dealing with these cases. He was a great advocate for endeavouring, before all things, to save the patient's life before attempting any prolonged operation which might seem theoretically desirable. To this end he urges that in many cases the early treatment should be by incision of bowel and evacuation of contents, the open bowel being afterwards fixed in the wound and a drainage tube inserted. This simple operation which may, if necessary, be performed without an anæsthetic was the means in the author's hands of saving many lives, and he strongly advocates its adoption in cases where the patient's strength is not equal to a more serious operation.

The sections on the surgery of the kidneys, and on that of the liver and gall-bladder, are among the best in the book, and are chiefly notable as being terse and didactic, so as to form an excellent guide for a young surgeon wishing for a trustworthy authority. The work of Lawson Tait in these fields is fully acknowledged, while at the same time the author draws freely upon his own very considerable experience.

The final section deals with the subject of peritonitis. The author makes a good working classification into simple, septic, and specific. He speaks favourably of the use of purgatives in this affection and does not altogether condemn the cautious administration of opium, but he puts aside belladonna as at best useless and at worst harmful.

Sub-phrenic abscess is fully described and directions are given for operating on this obscure and dangerous malady, while pelvic cellulitis and tubercular peritonitis are more briefly but effectively dealt with.

The book as a whole is characterised by the individuality of the author, whose strength of mind dominates all he has to say. It is evidently the work of one who had tried and thought out the methods recommended. It is no mere compilation, but is written by a worker for workers. As we turn over its pages we are filled with regret that the author's work should have

terminated so prematurely and that he was not spared to bring out this sixth edition. Our readers will agree with us, however, that the editorship has been ably carried out by Dr. Swain, who for many years had assisted Greig Smith in his abdominal work.

Diseases of the Gall-Bladder and Bile-Ducts. By A. W. Mayo Robson. Pp. 150, 27. London: Baillière, Tindall & Cox. 1897.

In the spring of 1897, when as Hunterian Professor, Mr. Robson lectured at the College of Surgeons, we read these lectures as they appeared in the medical journals. In their present form they are enriched by numerous photographs of specimens illustrating diseases of the gall-bladder and bile ducts in the museum at the College of Surgeons and in the museums of the various London Medical Schools. Almost half the book is devoted to the consideration of the inflammatory affections of these structures; tumours are then fully treated of, and the rest of the work is taken up with the subject of gallstones. A very valuable table of a consecutive series of 170 cases of operations on the gall-bladder and bile ducts is added. Such a work as this, from the pen of a surgeon who has had a larger experience of the surgical treatment of the diseases of which it treats than any other, is of very great value indeed. Mr. Mayo Robson has had a remarkably successful series of operations for gallstones, and a surgeon with such a record is entitled to write with authority and may well be read with advantage.

Surgical diseases of the liver, such as abscess and hydatid cysts, are not of course considered in this volume, but it covers more ground than Mr. Robson's clinical manual on gallstones. Reference is made to Mr. Robson's case of removal of malignant disease of the gall-bladder which invaded the liver. The whole mass was removed, after ligation around the liver substance below the growth, and the patient recovered. The case was reported to the Royal Medical and Chirurgical Society. We are interested to see that Mr. Robson is not in favour of cholecystenterostomy in cases of malignant growth obstructing the common duct. He thinks it open to question whether the mortality is not too high to make the operation justifiable.

Mr. Robson's attempt to explain the fact—now generally recognised—that in gallstone obstruction the gall-bladder is empty and contracted, rather than dilated, is more satisfactory than most explanations which we have seen. The so-called "ideal operation" seems to obtain more favour with Mr. Robson than it has in the past: he thinks "the serious objection to it is that the benefits of drainage are not obtained." The important subject of suppurative cholangitis is fully considered, and attention is directed to the value of drainage of the gall-bladder in such cases. The work is evidently the outcome

of the labours of a busy surgeon: words are not wasted; everything is clear and concise; guides to surgical practice abound; and no surgeon will regret the time spent in its perusal. But we are bound to say that, although the book is well printed, in the presentation of his work Mr. Robson has done himself some injustice. We would rather have had an index at the end of his volume than the thirty-two pages of advertisements which are given to us, and we do not think the nine lines after his name on the title-page are in good form.

The Deformities of the Fingers and Toes. By WILLIAM ANDERSON. Pp. viii., 150. London: J. & A. Churchill. 1897.

The groundwork of this book was a course of lectures delivered by Mr. Anderson, at the Royal College of Surgeons, in 1891. It is a valuable contribution to the surgery of deformities.

The important subject of Dupuytren's contraction of the palmar fascia is fully considered, and the various forms of contraction of the fingers described. The very common affection of the great toe known as Hallux valgus is of course referred to, and an interesting account is given of Hallux flexus, a disease only recognised during the last ten years.

The anatomical knowledge of the writer increases the value of his opinion on the pathology and treatment of these deformities, and this little work may be read with advantage by all who have to treat deformities of the fingers and toes. It is clearly written and well illustrated, but we do not like to see even a book of this character without an index.

The Relief and Cure of Spinal Curvatures. By Dr. PERCY G. LEWIS. Pp. xii., 208. London: John Bale, Sons & Danielsson, Ltd. 1897.

There is nothing very original in this small book, which is written "for the General Practitioner by a General Practitioner." It is illustrated by a large number of photographs of cases which have been under the author's care, but most of them are of little value in conveying information to the reader. The chapters on treatment are eminently practical and judicious. Mechanical treatment is advised to a slight extent only, and reliance is placed chiefly on muscular exercises, a very good description of which is appended. The author quotes largely from Roth, Barwell, Brodhurst, Noble Smith and other writers; and if he does not give us anything new of his own, he at least recommends the best work of others. The book may be looked upon as a trustworthy guide in the treatment of spinal curvatures.

The British Pharmacopœia. Pp. xxxii., 535. London: Spottiswoode & Co. 1898.

It is highly desirable that we should at the first possible opportunity notice the new edition of the *British Pharmacopœia* which has recently been issued. While its scientific standard is far in advance of its predecessors, especially in respect of pharmaceutical processes and botanical references, there yet remain some curious anomalies, due possibly to the prevailing of individual opinion of members forming the symposium by which the *Pharmacopœia* has been compiled. It is impossible to make here any attempt at a detailed analysis of the work, for that would occupy many pages. It is an absolute necessity for every practitioner within the next few months to make himself thoroughly acquainted with the numerous alterations which have been made, many of which are of importance.

It will be observed that the number of omissions of articles which were contained in the last edition largely exceeds in number the addition of novelties in the present issue: on looking over the list of these omissions and additions one is surprised at many of the useful preparations—such as ext. colchici acet.—being expunged, while other useless drugs—like hemidesmus—are retained: the additions consist mainly of new preparations, hardly any important drug being now made official for the first time, unless thyroid gland can be so considered.

By way of example of attempted improvements the tinctures may be taken as an instance; these have obviously been divided into two main groups in respect of the average dose. Of the more potent drugs the dose of the tincture is given as being from five to fifteen minims, the dose of the less powerful being given from half a drachm to a drachm. In order to reduce the tinctures thus into two ranks, it has been necessary to make the strengths of the tinctures of nux vomica and podophyllum twice as strong, and the ethereal tincture of lobelia one and a half times as strong, as in the old edition, while the tinct. chloroform. et morph. co. contains four times as much morphia as its predecessor. On the other hand, tincture of strophanthus is only half the strength. With these various alterations however, nothing like complete symmetry in dosage has been gained: tinct. conii is ordered in the small dose, tinct. hyoscyami in the large, and tinct. croci also in the small dose, while tinct. opii stands isolated midway between the two main classes. It is clear, therefore, that considerable alteration has been made in familiar preparations without corresponding advantage being obtained.

Omitting all reference to the various excellent appendices, which are of pharmaceutical rather than of medical interest, we cannot refrain from expressing unqualified admiration for the index. This must have cost great labour in preparation; besides a mere index, it is also a posological table and gives in

addition the strengths of most preparations. This portion of the work is a veritable triumph, and will be the most useful part to those who consult the book.

We have received four small books dealing with the Pharmacopœia. These we hope to notice in a future number. They are issued respectively by Messrs. Evans, Gadd & Co.; Messrs. Ferris and Co.; the Pharmaceutical Journal Office; and Boot's Pure Drug Co. All seem likely to be useful. We understand that from July 1st, the local druggists will dispense the new preparations, unless other definite directions are given.

Lectures on the Action of Medicines. By T. LAUDER BRUNTON, M.D., F.R.S. Pp. xv., 673. London: Macmillan and Co., Ltd. 1897.

Of the nature and description of the contents of this book we shall not permit ourselves to say more than that it is a reprint of a shorthand report of Dr. Lauder Brunton's extempore lectures on pharmacology and therapeutics to the students at St. Bartholomew's Hospital. We refrain designedly from giving any further information about the book, because it is one which every medical man should possess and use for instruction, relaxation, and enjoyment. For variety and freshness of interest, for stirring incident, for pointed anecdote, for entertainment and for general mental and moral improvement (as well as for the abundant technical information so ably afforded) we have no hesitation in saying that this book far excels the modern novel, and should be the guide, philosopher, and friend of every practitioner. In *The Beth Book* we are told that after conversation of a certain description, when Beth retired to bed "she was like one who has been bathed and perfumed after the defilements of a long journey." The perusal of Dr. Brunton's book after a long day's work will make the weary practitioner feel as if he also had been bathed and perfumed, without having previously wallowed in sexual mire.

The Diseases of Women. By J. BLAND SUTTON and ARTHUR E. GILES, M.D. Pp. 436. London: The Rebman Publishing Co., Ltd. Philadelphia: W. B. Saunders. 1897.

Although works on this subject have so largely increased of late, we welcome the present volume, which gives a clear and concise account of the matter of which it treats. Indeed we think that the pity is, there is not more of it. It is too brief. This is partly owing to the fact that too little mention is made

of methods other than those which the authors think the best. For example, in the treatment of fibroids by hysterectomy the extra-peritoneal treatment of the pedicle is absolutely ignored. This may be considered up to date, but it is doubtful whether it is always best in surgery to merely inculcate the ideal methods without referring to what may at least have to be done of necessity if not of choice. Much of the pathology and many of the excellent illustrations will be recognised by those familiar with the writings of one of the authors. We should much like to see a future edition assume considerably larger proportions, for we feel that the subject is in able hands.

The Surgical Diseases of Children. By EDMUND OWEN, M.B. Third Edition. Pp. xiv., 504. London: Cassell and Company, Limited. 1897.

In reviewing a book on diseases of children it is necessary to clear the way, by stating that we consider that such books—as usually written—are unnecessary. Many of the diseases which are common in childhood, and even those which are peculiar to that age, such as rickets, are often much better described in a work on general medicine or surgery. If the writer of a book on diseases of children would confine himself to the peculiarities of disease as manifested in childhood, his work would be of real value. He might take as a model Charcot's work on disease as it is modified by old age. But when we take up a book on diseases of children, we find as a rule a text-book of all diseases met with at that period of life. The value of such a work will depend on the skill of the writer in describing the diseases, and his experience in treating them; and such experience will only be gained by one who has been on the staff of a large children's hospital. The work will be of value mainly from the experience of the writer in this special line of practice. In this way the book before us is of particular value, for Mr. Owen is well known as an able surgeon, with a very large experience of surgical diseases of children, and hence the opinions he expresses are well worth careful attention. But the work as a text-book of surgery—as indeed it is—should in no way replace the well-accepted text-books of the present day, even in the study of diseases which occur in children: for instance, the subject of talipes is far better described in one of our large text-books of surgery, such as Erichsen or Treves, than it is in Mr. Owen's book, and yet it is essentially a deformity demanding treatment in childhood. In Mr. Owen's description of the deformity, there is no mention whatever of the condition of the structures in the deformed foot. A work on surgical diseases of children should supplement, and not replace, a study of such diseases in the larger works on general surgery,

and should supplement them only in so far as it sets forth the peculiarities of disease occurring in childhood.

As a text-book of surgical diseases of children, Mr. Owen's work is a successful attempt to give in a small space a general outline of such diseases: it is by no means an exhaustive treatise. It would be better not to write on a subject at all than to treat it so inadequately as the important subject of thrombosis of the lateral sinus is dealt with. But here the author includes a disease by no means confined to children, and it is a good illustration of the mistake we pointed out in our remarks on what the scope of such a work ought to be. Then, again, in a book devoted to the diseases of children, surely the treatment of congenital dislocation of the hip-joint, by operation or otherwise, might have received full consideration, as it has filled so many pages of our journals with able articles for years past, but we are disappointed to find that this is not so.

This book is clearly written and remarkably well illustrated, and even includes so modern a picture as a skiagram of a case of tuberculous hip-disease. The author has evidently revised and added to the work in the light of recent discovery and increase of knowledge. There is also a vast improvement in the general appearance of the work. This edition has larger type and a much better cover than the previous issues had.

System of Diseases of the Eye. Edited by WILLIAM F. NORRIS, M.D., and CHARLES A. OLIVER, M.D. Vol. II.—*Examination of the Eye, School Hygiene, Statistics of Blindness, and Antisepsis.* Pp. 556. London and Philadelphia: J. B. Lippincott Company. 1897.

It is almost unavoidable, from the nature of the subjects it deals with, that this volume should be of less general interest than the other three of the series. The sections relating to the examination of the eye naturally suffer from this disadvantage most of all; and recognising this, the authors have in some instances apparently cut down their articles to the smallest possible limits. For example, in the chapter on the methods of determining acuity of vision there is no reference whatever to the important question of estimation of light-sense. The information afforded about mydriatics and myotics is in some respects hardly sufficient. The various theories of the precise method of action of drugs upon the pupil are not given, and it is a matter of regret that the strength of solutions is not stated in percentage. Atropinism—more generally known as atropine irritation—is important enough to deserve a fuller description. Mention is made of arecoline, a myotic of remarkable activity and likely to be of great practical use. The section on the art of ophthalmoscopy is not very satisfactory, and gives the impression that it has been introduced for the sake of theoretical

completeness rather than practical utility. Certain essential ophthalmoscopic appearances are very inadequately treated. For example, brief allusion to physiological and glaucomatous cupping of the disc, unless supported by diagrams and illustrations, is utterly useless: the important fact that normal retinal "vessels," as seen with the ophthalmoscope, are in reality hardly more than columns of blood is not brought out at all, and the "pathetic interest" of the albinotic fundus has not induced the author to deal with the various remarkable appearances of the choroid as fully as they deserve. The statement that the whiteness of the optic disc is "due to the myeline sheathing of the fibres, which is discontinued at the papilla border," is not in accordance with microscopic investigation, clinical appearance, or even ordinary text-book information. Were the myeloid sheath continued to the papilla border the lamina cribrosa would be hidden and the characteristic appearance of the healthy disc entirely altered. These and other numerous important omissions will be supplied no doubt in subsequent portions of the work; in which case, the chapter on ophthalmoscopy will be rendered to some extent redundant. The articles on ophthalmometry and prisms appear to contain all matters of essential importance, and all that need be known for the ready understanding and practical application of the "shadow test" is contained in a capital article by Dr. Edward Jackson, but it is a pity that his diagrams of the appearance of the "shadow" are not introduced. About one-quarter of the volume is devoted to Dr. Thomas Pooley's translation of Wilbrand's admirable article on perimetry. It is full of references to cases and the diagrams show the conditions found in almost every ocular or cerebral condition. Curiously enough, there seems to be no reference to the fields so often characteristic of hysteria. It will also be noticed that no modern self-registering perimeter is described, and that the test objects recommended are not those in general use. The chapter on the detection of colour blindness deserves special notice, on account of the growing but still dangerously inadequate attention which is being devoted to the subject. Even a casual perusal of this article will convince anyone that the testing of the colour vision, say of railway servants, should not be left in the hands of an untrained clerk, a practice which is as unfair to the men as it is dangerous to the public.

In a very good article on School Hygiene by Dr. S. D. Risley, dealing with the artificial production of myopia in schools, it is urged that near-sight is not directly hereditary, but that the configuration of the skull is inherited with the astigmatism which it involves: the struggle to improve the sharpness of the image by accommodative effort sets up pathological states which are the foundation of progressive myopia. Referring to a large number of patients repeatedly examined, he says: "My own cases, without exception, passed from the hypermetropic ball

over into near-sight through the turnstile of astigmatism. . . . In no instance did these eyes . . . become emmetropic at any stage of their progress." He recommends that as soon as a child can read its vision should be tested and any ametropia corrected. The question of the hygiene of the schoolroom and its furniture, so far as it affects the vision of the children, is carefully considered and illustrated with excellent plans and pictures. The abolition of ordinary desk slates is advocated; and for writing he advises, in preference to the upright style, an oblique position of the paper and consequently the adoption of slanting script, whilst the pupil sits square with the desk.

The volume concludes with a chapter on the micro-organisms of the conjunctival sac. It includes a description of some forty different kinds, most of which apparently have no special significance. The question of Sattler's "trachoma-coccus" is discussed at some length, but the authors conclude that there is not sufficient evidence of any specific bacterium of trachoma.

The volume is fairly well illustrated and seems to be singularly free from misprints, and there are but few variations, such as paralyzant, pathologic, macropia (for macropsia), from the generally accepted word forms. The reason for the arrangement adopted and the narrow limitations of some of the articles is not very evident; but this will no doubt be explained in the two succeeding volumes, to the publication of which we look forward with increased interest.

Practical Handbook of the Diseases of the Eye. By D. CHALMERS WATSON, M.B. Pp. xii., 236. Edinburgh: William F. Clay. 1897.

The author has not attempted to add another to the long list of large text-books of which the already overtaxed student has to make choice.

Now, however, that the study of ophthalmology has become a necessary item in the medical curriculum, it is only fitting that some short account of the subject should be placed within reach of those wishing to avail themselves of the clinical material to be found in the eye department of a large hospital. It is not necessary, nor indeed is it possible, for every medical man to make himself familiar with all those ills that the eye is heir to; but he should, at least, be able to differentiate between such maladies as iritis and glaucoma, and so avoid the terrible consequences that their confusion entails.

The subject matter of this work is very sound, and is simply arranged. The diagrams and plates are clear and expressive, and the work can be confidently recommended as a most satisfactory student's handbook. It contains all that is necessary for a very fair knowledge of ophthalmic work, whilst its size, lucidity, and usefulness should secure for it general acceptance.

Manual of Bacteriology. By ROBERT MUIR, M.D., and JAMES RITCHIE, M.D. Pp. xvi., 519. Edinburgh: Young J. Pentland. 1897.

Of the now numerous manuals dealing with the pathological side of bacteriology, this is one of the best. Without overloading the text with unnecessary details, trifling variations of manipulation, or processes of merely historical interest, the authors have succeeded in presenting a remarkably clear and well ordered account of the most approved methods of handling micro-organisms, followed by a series of chapters describing in detail those which are associated with various diseases. The information given is consistently accurate and up to date, and is illustrated by excellent reproductions of photographs.

An appendix containing equally satisfactory though brief accounts of malarial fever and dysentery brings to a close a work that may be strongly recommended to those who are entering upon the study of micro-organisms in relation to disease.

The Laboratory Text-Book of Public Health. By WILLIAM R. SMITH, M.D. Pp. xx., 322. London: Henry Renshaw. 1896.

This book is intended to serve as laboratory companion to candidates for the diploma in public health and aims at giving concise but sufficient descriptions of such processes as are required to be performed in the practical part of this examination. This intention is on the whole admirably carried out. The descriptions both of apparatus and of methods are very clear and intelligible, and the selection of the latter is well adapted to the requirements of the case.

The student is perhaps left a little in the dark as to the meaning of the analytical data he may have obtained from a given sample of water; but possibly the interpretation of results is not considered to be within the scope of the work. Water analysts, too, will hardly endorse the twice repeated statement that nitrates cannot be qualitatively detected in the presence of nitrites; and the process given for the detection of phosphoric acid is faulty in several respects: but with these exceptions the section on water analysis, one of the most important to the candidate, is well worked out.

The succeeding chapters on gas analysis, on the examination of foods, and on bacteriology are very judiciously written, all that is necessary, except perhaps Widal's serum test for typhoid, being presented in condensed but clearly expressed language.

Photo-micrographs of the commoner starches supplement the text, and will prove of great assistance.

It will be understood, of course, that for the written examination much additional reading will be necessary, but for the practical work it would be difficult to find a more appropriate guide.

The Analysis of Food and Drugs. Part I.—*Milk and Milk Products.* By T. H. PEARMAIN and C. G. MOOR. Pp. viii., 132. London: Baillière, Tindall and Cox. 1897.

This is the first instalment of a promised laboratory handbook, intended to deal with such investigations as constitute the duties of the public analyst: and the wisdom of choosing milk to commence with is obvious when it is remembered that probably no form of sophistication practised at the present moment strikes so directly at the wellbeing of the nation as the adulteration of milk. For not only do the abstraction of cream and the addition of water seriously diminish the food value of milk, but the latter fraud has frequently been the means of introducing specific infections. The authors are sanguine as to the beneficial results of the establishment of legal standards of composition, and would be justified if, as they appear to anticipate, such standards were fixed at or about the average composition of normal milk. It is much to be feared that the opposition would be so strong that any standards legalised would only confirm the present unsatisfactory position.

The legal expert, too, who may consult this work for data upon which to base standards, will find it difficult to form a definite conclusion as to what average milk is. Thus in reference to the proportion of fat in milk, we are told on p. 4 that the average is 3.6 per cent.; on page 11 it is 4 per cent., and that only on the rarest occasions does milk contain less than 3.5 per cent.; whilst on p. 25 the average is given as 3.5 per cent. The highest figure given is probably not far from the truth, seeing that the enormous body of evidence (120,540 samples) collected by Dr. Vieth, and the lengthy researches by the Government chemists quoted on pp. 13–16, agree in recording an average of 4.1 per cent. of butter fat.

The descriptions of processes are clearly worded, and in many cases quoted verbatim from the original: the vexed question of the addition of antiseptics to food is discussed, and methods for their detection in milk, butter, and cheese adequately described. Exception may perhaps be taken to the description of the Reichert process. The method as given is not Reichert's process in its original form, but as improved by Meissl and Wollny; and a very important detail noted by the latter observer is omitted. This is the complete fusion of the fatty acids before distillation is commenced. The neglect of this precaution may result in a reduction of as much as 30 per cent.

in the Reichert figure, and has more than once led to the condemnation of genuine butter in consequence.

Not the least valuable feature of this work is the large number of analyses of foods obtained by modern and trustworthy processes: amongst these may be reckoned those included in the section on cheese, where the composition of many well-known varieties is recorded. When completed this volume is likely to take rank as a standard work of reference in matters relating to the analysis of food and drugs.

Physiology. Students' Note-Book (for the Laboratory). Part I. —*Physiological Chemistry*. By ARTHUR J. HALL, M.B. Pp. 47. London: Baillière, Tindall, and Cox. 1897.—Dr. Hall has arranged his work on a novel plan—the alternate pages are left blank for a student's notes on the reactions described on the opposite page. It must be confessed that some laboratory guides tend to assume the bulk and complexity of text-books. Such a plan as is here recommended has much in its favour; it is simple, and yet gives the pupil sufficient theory to make his practical work interesting.

The Student's Guide to Medical Diagnosis. By SAMUEL FENWICK, M.D., and W. SOLTAU FENWICK, M.D. Eighth Edition. Pp. xxxii., 468. London: J. & A. Churchill. 1897.—The eighth edition of a book needs little comment; it is obvious that the book is a popular one, and further that, since the first edition was written in 1869, it was necessary that the edition of 1897 should have been practically re-written. We are told that "almost all the old microscopical illustrations have been discarded for others of a more modern type"; but we think that the sphygmograms (page 32) might well be replaced by something better. An attempt to compress the outlines of pathology and the symptoms and physical signs of all the ordinary diseases into the compass of this volume is of necessity bound to do scant justice to some of them.

Notes on Malaria in Connection with Meteorological Conditions at Sierra Leone. By Surgeon-Major E. M. WILSON. Pp. 16. London: H. K. Lewis. 1897.—The results of the author's observations show that the East India regiments suffer considerably during the first year of service on the coast of Sierra Leone, and less in succeeding ones; that whites are more susceptible than coloured troops; that the greatest number of cases occur in the rainy season, the least in the dry; and that the most important factor is the relative humidity of the atmosphere. The author speaks from experience, and his suggestion that the coloured troops should be put on a ration allowance should be seriously considered by the authorities.

The Pocket Therapist. By THOS. STRETCH DOWSE, M.D. Pp. 192. Bristol: John Wright & Co. 1897.—The author makes so ample an apology for "this small and apparently trivial work," and for "its insufficiency and inadequacy," that we have little need to point out its errors of omission. It contains a record of much ripe experience, and therefore cannot fail to be useful to the inexperienced; but why the latter should not go to a complete text-book or a monograph for information we fail to see. There appears to be little need for a book like this, which in so small a space professes to be a guide to therapeutics, to health-resorts, poisons and their antidotes, and clinical diagnosis. We wonder what mysteries are hidden behind such names as Branalcane, Salycilic (*sic*) Valsol, Neboline.

Diet Chart and Alimentary Index. Suggested by M. J. KENNY. Bristol: John Wright & Co. 1897.—Each page of this book is a list of ordinary foods and drinks, with a space for marking those which are suitable to the case: the page is torn out and given to the patient. The list is by no means complete, and we fail to see on what principle the selection has been made. The alimentary index is inside the covers, and we venture to think that this is the most useful part of the book. Some formulæ for making broths, &c., are on the back of each chart. Surely the beef tea need not have the meat excluded by straining: why should not the whole of the meat be retained?

Gynæcology in Berlin. By H. MACNAUGHTON-JONES, M.D. Pp. 28. London: John Bale, Sons and Danielsson, Limited. 1897.—Reprinted from the *British Gynæcological Journal*, this forms an interesting little book, containing in a concise form many methods which are not usually practised by English surgeons. The observations are taken from the clinics of Martin, Olshausen, and Landau, whose work is in many respects original. It is well worth reading, and is freely illustrated with helpful plates.

Our Baby. By Mrs. LANGTON HEWER. Fifth Edition. Pp. vii., 140. Bristol: John Wright & Co. 1897.—We so recently reviewed the previous edition, that a notice need hardly be given to this work. The book is "revised," but is practically the same as the last edition. It contains much useful information; but, like most publications of this sort—especially later editions—too much amateur physicking is recommended.

A Handbook of the Diseases of the Eye. By HENRY R. SWANZY, M.B. Sixth Edition. Pp. xviii., 608. London: H. K. Lewis. 1897.—The author has thoroughly revised his book, and has not materially increased its bulk. This is accounted for, to some extent, by the fact that the pages on "Some Elementary Optics," found in the first chapter of previous editions, have been omitted. The practitioner will especially appreciate Chapter xvii., in which the ocular diseases and symptoms liable to accompany diffuse

organic brain lesions and diseases of the spinal cord have been treated more fully, whilst there has also been introduced an account of the "Functional Derangements of Vision." An excellent account of tumours of the orbit and neighbouring cavities is to be found in Chapter xix., the purely pathological aspect of that class of diseases being avoided. The aim of the author to say all he ought, without saying all he might, has been successful; the result being an exceedingly well-written book, that, taking into consideration its size, cannot, in our opinion, be excelled.

A Handbook of Diseases of the Nose and Pharynx. By JAMES B. BALL, M.D. Third Edition. Pp. xii., 404. London: Baillière, Tindall and Cox. 1897.—We notice very few changes in the present edition of this work, which we had opportunity to notice favourably on a former occasion. The author has wisely refrained from adding materially to the length of the book, and has kept it within a handy compass. It now gives in concise form a most readable and trustworthy description of all the ordinary affections of the nose, naso-pharynx, and pharynx. We can recommend it as well suited for students or practitioners.

Excretory Irritation, and the Action of Certain Internal Remedies on the Skin. By DAVID WALSH, M.D. London: Baillière, Tindall and Cox. 1897.—This little work is made up of three elements,—a graduation thesis of 43 pages, a paper of 11 pages read at the Third International Congress of Dermatology, and a publisher's list of 48 pages. The two papers are on a similar topic, one which Dr. Walsh has made his own, the association between excretion and dermatitis. That the skin suffers as one of a group of excretory organs is abundantly demonstrated, and the action of certain internal remedies on the skin is explained. It is interesting to note "that any internal irritant which inflames the skin may be suspected of inflaming other excretory outlets," and "that the law of excretory irritation has a wide application to general pathology."

The Treatment of Lupus. By BALMANNO SQUIRE, M.B. Pp. 62. London: J. & A. Churchill. 1897.—The principal object of this booklet seems to be the recommendation of "multiple linear scarification" by means of a mincing machine with sixteen blades, set $\frac{1}{32}$ inch apart. From our own experience—and from enquiries—no one seems to have come across any of the "very many cases of lupus" so completely treated "that the patients have remained absolutely free from the disease for a series of years." Dr. Squire appears to overlook the fact that many cases of so-called lupus erythematosus are but the incipient stages of lupus vulgaris.

A Plea for a State Medical Service. By JAMES ERSKINE, M.B. Pp. 20. Glasgow: John Morgan & Co. 1897.—Dr. Erskine's plea contains many pleas, and space will not permit us to

criticise them. Though many of the opinions expressed by the author are fully warranted by facts, we do not think the remedies he recommends would cure the numerous evils that exist. We are not educated sufficiently yet in socialism—to use the term in its widest sense—to adopt a State medical service.

Thirty-sixth Annual Report of the Cincinnati Hospital. Cincinnati: *The Commercial Gazette* Job Print. 1897.—The most noteworthy topic we have noticed in this volume of 276 pages is a report on a series of cases of syphilis treated with Coley's mixed toxins. In some of the cases the result was good, the drug acting as quickly and as well as mercury. The report shews "the present of the remedy—its past is very young, its future yet unveiled. Time alone can fathom the outcome of these cases."

King's College Hospital Reports. Vol. III. London: Adlard and Son. 1897.—Old King's men will take more special interest in this volume in consequence of the obituary notice of Sir George Johnson, and the description of the new ophthalmological theatre which forms his memorial. Dr. Raymond Crawfurd, in a good paper on Graves's disease, emphasises the neurotic theory as opposed to the popular one of thyroid toxæmia, and he has great expectations that the influence of suggestion on the disordered mental state may prove to be of value in the treatment of the disease. The record of "what old King's men are doing" shows that they are well maintaining the credit of their school.

Saint Bartholomew's Hospital Reports. Vol. XXXII. London: Smith, Elder, & Co. 1897.—*St. Bartholomew's Reports* is, as usual, full of interest. The first two papers are reminiscences of two well-known surgeons: one, Professor Humphry, of Cambridge, had been a student at the hospital in the days when Sir James Paget was curator of the museum; the other, Mr. Morrant Baker, a man well known to all students of more modern times. These papers will be read with a sad interest by all old Bartholomew's men. One of the most striking and almost unique papers in this volume is a collection of aphorisms of Dr. Gee. They have been collected and edited by Mr. Horder and revised by their author. When reading them many will feel that they are again standing around the bedside of the patient and listening to Dr. Gee's remarks on the diagnosis and treatment of the case. Some cases of enteritis which simulated intestinal obstruction are recorded by Dr. Mitchell. In three out of the four cases the patients were operated on for intestinal obstruction. A very valuable paper on hernia of the vermiform appendix has been contributed by Mr. McAdam Eccles, in which he has given the records of a large number of such cases. As most of the papers are well worth reading, it seems unnecessary to refer to them in detail. They are on both medical and surgical topics. The volume contains the usual table of

cases, with interesting remarks on the more important ones, and a description of specimens added to the museum.

The Westminster Hospital Reports. Vol. X. London: J. & A. Churchill. 1897.—This volume is a welcome addition to the series, for it contains the records of an unusually interesting number of cases of the varied description necessarily found in "Reports." The accounts of *post-mortem* examinations are very full; but we think it desirable that in future issues a greater prominence should be given to the clinical aspects of the disease by more fully tabulating some of the chief symptoms found in the various diseases—as in Table F, which treats of lobar pneumonia.

Transactions of the College of Physicians of Philadelphia. Third Series. Vol. XVIII. Philadelphia: Printed for the College. 1896.—The discussions and papers collected together in these *Transactions* make a very readable volume, and are of very considerable interest. Brain-surgery is, perhaps, the most important subject dealt with, and is liberally represented. Dr. W. W. Keen speaks hopefully of the surgical future of intra-cranial tumours, and makes some interesting observations on the attempts to secure bony occlusion of trephine-openings; Dr. Mills has a thoughtful paper on diagnosis; and, besides other formal papers contributed to the regular discussion, there are reports of isolated cases. A discussion on the Röntgen rays is included, but this is hardly as satisfactory; the ground is too shifting, and some of the conclusions are already out of date. Two cases of the rare condition of floating liver are reported; and there is a good sprinkling of interesting clinical material. The printer's work has been excellently done.

Transactions of the New York Academy of Medicine. Second Series. Vol. XI. Printed for the Academy. 1895.—This is a stout volume of over 600 pages, which contains many papers on all branches of medicine read before the Academy in 1894. A reflection which strikes us, on looking through these *Transactions* two years subsequently, is what a small amount of knowledge is added to our stock by all this work. Thus, there are three elaborate papers on scurvy in infants, not one of which goes beyond what Cheadle and Barlow had already established. The papers were no doubt interesting at the time, insomuch as they served to impress on the audience the clinical features and treatment of the malady, but seem hardly worth printing. There is the usual sprinkling of what can only be called oddities of medical thought. Thus, Dr. Achilles Rose advocates Greek as the international language of physicians. Again, Dr. Van Fleet examined, by a somewhat primitive method, the eyes of a number of children in reformatories, and finding a great number of errors in refraction, comes to the conclusion that defective eyesight is a factor in the production of crime. He does this, too, without attempting to determine whether the percentage of

children with defective vision in these reformatories is greater than that in public schools and institutions not reformatories. Such are the whimsicalities of specialism.

Transactions of the Medical Society of the State of New York. Published by the Society. 1897.—This report contains no less than forty-six communications on various subjects, some of which are of considerable interest both medically and surgically. A large space is devoted to papers on the relation of impure water to disease, typhoid fever taking the greater share of attention. Thus there are papers on the clinical diagnosis of the disease, the life-history of the germ, the disease in infants, the treatment of the disease, and methods of disinfection of typhoid excreta. Surgically there is a complete exposition of hereditary syphilis by Dr. A. Jacobi, and a paper by Dr. A. M. Phelps on the management of club-foot, which gives his later experiences with the operation which he devised and was the first to use. There are papers on the modern treatment and prognosis of heart disease, on cough, on the advantages of strophanthus, on certain affections of the eye, on gauze drainage, and various conditions which require abdominal section, besides numerous other articles. The volume may be studied with profit by those engaged in any branch of the profession.

Transactions of the Grant College Medical Society, Bombay. Bombay: Printed at the *Tatva-Vivechaka* Press. 1897.—In spite of plague, famine, and earthquakes, the medical work of our Indian *confrères* goes steadily on, and this record, although carelessly sent out with plenty of misprints, and without title-page, table of contents, or index, gives much interesting information on the Bubonic Plague in Bombay. A mortality during the first four weeks of the outbreak ranging from 95 to 99 per cent. is in accord with what we know of the pathology of the disease, for which no efficient antidote appears yet to have come into use.

Transactions of the American Gynecological Society. Vol. XXI. Philadelphia: Wm. J. Dornan. 1896.—The science and art of gynæcology owes much of its advance to trans-Atlantic operators, and every volume published by the American Gynecological Society bears witness to the originality of its members. The present volume is in nowise behind its predecessors, and everyone interested in the subject will find in these pages a collaboration of the most careful and highly successful work in this branch of surgery. We cannot specify the different articles treating of so many varied subjects, but as a whole the book is characterised by profound research and literary merit, and the writers must be regarded as pioneers of the operative treatment of diseases of women.

Transactions of the Obstetrical Society of London. Vol. XXXVIII. London: Longmans, Green, and Co. 1897.—Of the many interesting communications contained in this volume,

it is only possible to mention a few of the cases and papers contributed, one of the most important subjects dealt with being deciduoma malignum. Mr. Rutherford Morison and Dr. Herbert R. Spencer each reported a case. Mr. John D. Malcolm narrated a case of malignant disease of the uterus, with numerous deposits in the lungs, and death following an abortion; while Dr. T. W. Eden presented a paper, in which he criticised the whole subject, and pointed out several weak points in the cases of this affection described by continental and other observers, pointing out that plasmodia resembling the multinucleated syncytial masses have been found in sarcomata unconnected with pregnancy, and that the transition from placental villi to the structures composing these tumours has not been demonstrated; he states that proof of two points is necessary to the acceptance of the theory that these tumours are caused by the growth of decidual elements of partly maternal and partly fœtal origin, the first being the connection of the growth with a preceding pregnancy, and the second its development from structures which may be definitely recognised as placental relics. The interesting discussion which followed must be read in the original; but while the pathological changes which occur are debatable, the clinical manifestations are unmistakable, and point to the occurrence of a peculiarly rapid and fatal form of malignant disease apparently occurring in connection with pregnancy. Space does not permit a description of the other papers. The volume is well indexed, and contains some capital illustrations of naked-eye and microscopical changes occurring in the subjects under review.

The American Year-Book of Medicine and Surgery. London: The Rebman Publishing Co. (Ltd.). Philadelphia: W. B. Saunders. 1898.—The third number of this blue-cover year-book, being a digest of scientific progress and authoritative opinion in all branches of medicine and surgery, collected and arranged by numerous coadjutors, under the general editorial charge of Dr. George M. Gould, forms a volume of 1077 pages, nearly 200 less than last year, and we are informed that "with the growing clearness of conception, on the part of the editors, of the exact nature of the professional need there has been a corresponding recognition of the necessity of keeping the epitomization within the limits allotted to previous issues." It forms still a very large but handsome and well-illustrated volume, of which the publishers and editors may well be proud. The first subject dealt with is typhoid fever, and some twenty-seven pages are devoted to this topic. Last year we took occasion to comment upon the fact that the Widal test had been ignored, but now we come upon it as the most important contribution to the progress of internal medicine, and Drs. Pepper and Stengel state that "for our own part, we have become so thoroughly convinced of the value of the test that we should hesitate to

diagnose typhoid fever in any case in which repeated examinations, made in approved fashion, failed to reveal agglutination." A table is given comprising over two thousand cases by various observers, and it demonstrates very conclusively the great diagnostic value of the reaction, correct results having been obtained in 96.5 per cent. of the cases. The diazo-reaction of Ehrlich has at last been considered worthy of note, and is reported to have "a negative diagnostic value," as also to be of some aid in prognosis, for, "if found in the 1st, 2d, or 3d days, or if it disappears by the end of the 2d or 3d week, the prognosis is favorable," whereas, "if constant to the end of the 4th week, it is more uncertain and relapse likely." In the domain of treatment the authors note the further advances of serum therapeutics; but although some favourable cases of treatment of typhoid by an antitoxic serum have been recorded, yet there is no certainty of success in this direction. The purgative method appears to be diminishing in popularity, but the cold-water treatment maintains its position, and operative interference in the 1 or 2 per cent. of cases of perforation has been successful in a few cases. In the case of tuberculosis there is as yet little certainty, notwithstanding the favourable reports of the followers of Maragliano, of Paquin, and of Koch. The best results seem to be always obtained by the persons who have produced the serum, but the results of experimental work in serum-therapy are more definite and satisfactory than the reports of its clinical use seem to indicate. It is said that "the Schott method for the treatment of heart-disease is still exciting considerable discussion. In general, the evidence is favorable, although warnings against its indiscriminate use are not lacking." The Röntgen rays have been employed for the determination of the alterations produced in the size of the heart, and Schott points out the necessity for a consideration of relative distances between the Crookes tube, the patient, and the photographic plate. The distance between tube and plate has always been one-half metre, experience having shown that this distance reproduces the natural size of the heart. Photographs and diagrams of the fluoroscopic image are not only a valuable addition to physical diagnosis, but they at the same time show in a most trustworthy way the process which takes place in the heart. The screen appears to give the best results.

The Medical Annual. Bristol: J. Wright & Co. 1898.—An enormous amount of information is contained in this volume. In fact it gives us all that is worth knowing about the medical and surgical novelties of the past year. The staff of contributors includes many men of great experience in their special departments of work, and they have well performed their heavy task of abstracting and editing. The volume is well illustrated, and is, in every way, a valuable book.

Index-Catalogue of the Library of the Surgeon-General's Office, United States Army. Second Series. Vol. I., A—Azzurri. Vol. II., B—Bywater. Washington: Government Printing Office. 1896-7.—These portions of this stupendous work include 22,078 author-titles, representing 12,510 volumes and 21,129 pamphlets. They also contain 13,658 subject-titles of separate books and pamphlets and 52,109 titles of articles in periodicals. Every page bears testimony to the arduous and well-executed task of the compilers, who are to be much congratulated on their valuable work. No library can do without this time-saving book of reference.

The Philadelphia Medical Journal. Philadelphia: The Philadelphia Medical Publishing Company.—So far from Dr. Gould's journalistic energy being used up by the production of his *Year-Book*, it seems on the contrary to have received fresh stimulus, for he has become the editor of the newly-founded *Philadelphia Medical Journal*, a weekly periodical which, in the opinion of its promoters, has "better professional aims and methods than have generally been customary," and which is going to decline any advertisements of secret preparations. The journal is decidedly one to take, for Dr. Gould impresses upon it the marks of his excellent individuality. We specially like the way in which "the latest literature" is presented; but it would be still more attractive if it were introduced by a classified index to the given abstracts. There does not seem sufficient reason for, or advantage in, the topsy-turvydom which puts the original articles at the end of the journal, as if they were the least important part of its contents.

Smithsonian Report. Washington: Government Printing Office. 1896.—The most interesting portion of this volume is the series of essays on a variety of scientific subjects which constitutes the general appendix. Amongst these are several sent in competition for the Hodgkins prizes, the most valuable of which was awarded to Lord Rayleigh and Professor Ramsay for their discovery of argon. Many of the papers here printed will be of special interest to readers of this *Journal*. A perusal of the secretary's report will show that this institution is doing most valuable work, both by assisting original research and by rendering easily accessible information as to recent progress in almost all branches of science. If the reports could be issued more promptly their value would be greatly enhanced.

The Isle of Man Official Guide. Pp. 80. Douglas: Brown & Sons, Limited. [N.D.]—Issued under the auspices and authority of the official board of advertising for the Isle of Man, this booklet gives all details such as are likely to be useful to intending visitors to the island, and cannot fail to be of service to such.

Notes on Preparations for the Sick.

Tabloids: Thyroid Colloid; Lactophenin; Colchicine Salicylate; Chemical Food; Cotarnin Hydrochloride (Stypticin).—BURROUGHS, WELLCOME & Co., London.—We have never had reason to think that drugs in tabloid form were less active than when given as powder, or in pill or cachet. The 4-grain **Lactophenin** tabloid is likely to be a very efficient antipyretic, and the **Colchicine** (gr. $\frac{1}{25}$) tabloid a very convenient form for the waistcoat pocket of the gouty man. The **Chemical Food** tabloids are sugar coated and quite inviting. The **Cotarnin** tabloids are prepared from narcotin, one of the opium alkaloids, and they are used in the treatment of uterine hemorrhage. They are found most useful in cases of uterine subinvolution, and in endometritis accompanied with menorrhagia. Gottschalk has made numerous experiments with stypticin and speaks highly of its value as a hæmostatic. The tabloids each contain $\frac{3}{4}$ grain of the drug, and form a handy method of administering it.

"Ambrosia."—EVANS, GADD & Co., Exeter.—The idea of combining Devonshire cream with an active extract of malt was one which the cod liver oil taking patient was not slow in appreciating. The compound called "Ambrosia" contains 75 parts of the Exonia brand of malt extract, with 25 parts of pure cream. Its price has been its only disadvantage, and now that this objection has been removed it should have an increasing popularity amongst others than the gods. We have found that there is usually a decided gain in weight when the drug is taken in fair quantity.

Sterilised Milk.—I. F. ARROWSMITH, Clifton.—The value and importance of sterilised milk is now well known, and we are glad to see that a local firm has had the enterprise to procure the necessary machinery for rendering milk sterile and keeping it so. By the courtesy of the manager we were able to see the whole process from start to finish, and we were much struck by the perfect cleanly and scientific manner in which the heating and storing was done. The milk has a slight saccharine flavour, but is of the same nutritive value as ordinary milk, and has the advantage that it can be kept in the hermetically sealed bottles for any length of time. We expect and hope for a considerable demand for this pure milk. On account of the evils that have come to us through milk, its sterilisation is an important matter and one to be very seriously considered.

Cream Milk for Infants.— AYLESBURY DAIRY COMPANY, London.—As its name implies, this milk is specially rich in cream, a constituent so important in the feeding of infants. It deserves, and we have no doubt receives, extensive patronage.

Nestlé's Condensed Swiss Milk.—HENRI NESTLÉ, London.—This is so well known to the profession, that further confirmation of its value is hardly necessary. Its extensive use is fully warranted by its purity and constant accuracy of composition.

Cabot Bread and Biscuits.—HUMPHRIES & BOBBETT, Bristol. —A sample of this bread, now so well known in Bristol, has been forwarded to us, and we find it exceedingly agreeable eating and very readily digested. It is, further, pleasant to the taste, not being too moist or gritty. We can recommend it as a thorough good article of home production, although, not knowing the processes through which the flour has passed, we are unable to say in what its special virtue consists. **Biscuits** with the same distinctive appellation have also been sent. These we found very palatable.

Vimbos.—VIMBOS, LIMITED, London.—This is another fluid meat extract, shewn by Dr. Stevenson Macadam's analysis to contain nitrogenous organic matter amounting to over 50 per cent. It is a very viscid fluid, which, diluted to twenty times its bulk, gives a very abundant precipitate of albumen when boiled or treated with picric acid. There is nothing objectionable in either odour or taste, and we can quite accept the statement that it must be far more nourishing than ordinary beef tea. It makes excellent beef tea, or it may be used as a paste upon bread. "In all respects Vimbos is a fluid beef of the highest order."

Bovril Stamnoids. — BOVRIL LIMITED, London. — These tabloids are described as "a lunch in the waistcoat pocket." They are not unpleasant to the palate, and they must contain an appreciable amount of easily assimilated nourishment in the smallest possible bulk, suitable for cyclists and others who want food by the way at times and places where set meals cannot be procured.

Milk Chocolate.—CADBURY BROS., Bourneville, Birmingham. —This very palatable preparation is suitable for carrying in the pocket, and must provide a more sustaining and nutritious food than the ordinary chocolates without the milk. Cadbury's preparations are well known to be genuine, and to be free from adulteration with all harmful drugs.

Teething Pad.—MELLIN'S FOOD, LTD., London.—This is a cruciform porcelain ornament attached to a cord for hanging round the neck of the infant—two arms of the cross are covered with India-rubber. The apparatus appears to be designed in order that infant and nurse may have continually before them a reminder that Mellin's Food is suitable to the infant, and Mellin's Food Biscuits after teething. We have found that these biscuits are most acceptable to the convalescing typhoid patient of all ages.

Claiming to make refraction work easy for general practice, Mr. F. Davidson of London has introduced to our notice his complete sight test, which consists of an optometer, somewhat similar to that of Doyne, and of a specially constructed stiffened card, bearing, besides the usual Snellen's types, a graduated series of parallel lines, for estimating astigmatism, a set of colours, and a scale for measuring strabismus, etc. Mr. Davidson has also written a concise booklet bearing on these subjects.

The optometer is composed essentially of a number of concave and convex-spherical lenses, fitted into the margins of a pair of independently revolving mahogany discs, the whole being mounted on an adjustable brass stand. By a simple arrangement, these discs can be so adjusted that they correspond to, and indicate, the inter-pupillary distance; and by their rotation, successive lenses are brought in front of each of the patient's eyes, until the maximum visual acuity is attained. The instrument can be used for the retinoscopic as well as for the subjective method of examination, and by its means errors of refraction of from .25 degree to 19 degrees or 20 degrees can be rapidly arrived at; it is strongly made and well-finished, whilst it is impossible for the lenses to get lost or out of place.

We gladly welcome any means by which the practitioner may acquire sufficient confidence to test the sight of his patients himself, instead of placing them in the hands of the "consulting oculistic optician."

MEETINGS OF SOCIETIES.

Bristol Medico-Chirurgical Society.

March 8th, 1898.

Dr. J. E. SHAW, President, in the Chair.

Considerable time was occupied in discussing the propriety of the insertion of medical autobiographies in a lay publication.

Dr. MICHELL CLARKE showed (1) a case of paralysis agitans at an unusually early age. The patient was a man aged 38, and the symptoms first appeared as occasional attacks of tremor—soon becoming constant—in the left arm. Both sides of the body are now affected, the right

since three months. (2) A man affected with multiple neuritis of alcoholic origin. The case was a very severe one, of twelve months' duration. The disease began in the legs and spread to the arms. The interesting feature was the wasting of the small muscles of the hands that had occurred. In both arms and legs the muscles were symmetrically affected. The patient was now beginning to recover.

Mr. T. CARWARDINE exhibited some microscopical specimens of implantation cysts, and referred to an original illustration of an implantation cyst of the thumb, and to an illustration by Barker of a microscopic section of an implantation cyst in the Pathological Society's *Transactions*. Implantation cysts are due to proliferation of epithelium driven into the subcutaneous tissues by some traumatism, accidental or surgical. Accordingly, they occur in parts most liable to injury. Of twenty-one cases of cysts of the iris recorded by Hulke in the Reports of the Royal London Ophthalmic Hospital for 1869, seventeen cases were the result of injury. They occur frequently on the fingers, particularly the palmar surfaces of the terminal phalanges of the thumb and forefinger. Occasionally they are found in the palm of the hand. Animals are not exempt, for they are found in the axillæ of oxen which have been "prodded," and in animals injured by spikes and barbs of fences. The first microscopic specimen showed a minute and complete implantation cyst with a diverticulum leading to a sebaceous gland. The patient was a woman who was injured five months previously on the side of the nose by a stone, and she noticed a small lump for the first time five weeks before admission. The small tumour looked like an inflamed sebaceous cyst, and the contents also resembled such a tumour; but on very careful microscopical examination a small epithelium-lined cyst was found resembling inverted skin. The second specimen was from an implantation cyst of the arm. It showed trabeculæ with compressed papillæ of cutaneous epithelium, and cells like those of the Malpighian layer next to the trabeculæ. The third specimen was from a tumour of the finger which was recently removed by Mr. Munro Smith. The tumour was of thirty years' duration. Although no history was obtained, Mr. Carwardine regarded the microscopical appearances as characteristic of an implantation cyst.—Mr. C. A. MORTON referred to a case of this kind he had published a few years ago.[1] The epithelium had been carried into the deeper tissues by a thorn, several years before the cyst was noticed. It contained a black mass, which on soaking in alcohol split up into layers of corneous epithelium.—Mr. F. R. CROSS mentioned a case[2] under his care where a cyst on the iris followed a wound of the cornea with wire which carried an eyelash into the anterior chamber. The eyelash was removed with some of the adjoining iris; but active cells of the lash remained, and an implantation cyst lined by laminated epithelium was the result, as shown later by microscopical examination of the enucleated eyeball. He also published[3] the case of an implantation cyst following a good extraction of cataract, which gave excellent vision for several months. Glaucoma supervened. Enucleation of the eyeball gave the opportunity of microscopic examination, which exposed a typical implantation cyst lined by laminated epithelium.

Mr. C. A. MORTON showed a large tumour weighing 6½ lb. which he had removed with the breast from a woman aged 51. It had been growing for nine years, but had doubled its size in the two months before removal, and had then become very painful. Before removal

1 *Bristol M.-Chir. J.*, 1894, xii. 233. 2 *Tr. Ophth. Soc. Lond.*, 1893, xiii. 199.
3 *Ibid.*, 1892, xii, 175, and *Brit. M. J.*, 1892, ii. 130.

it presented some very soft bosses with stretched and purple skin over them; but the greater part of the growth was very hard, and many nodules movable on the large mass were detected. The tumour was of much interest, not only on account of its great size, but also because of its structure. The great mass of the growth was the ordinary fibro-adenoma; but here and there were nodules of tissue perfectly defined from the rest, and quite different both in naked-eye and microscopic structure. They were much softer than the fibro-adenomatous portions, of a yellow colour, and histologically showed a structure of small round cells, with a few oval and spiral cells, but no gland tissue whatever. Hence the tumour was a combination of pure sarcoma with fibro-adenoma. —Mr. J. LACY FIRTH remarked that these benign tumours termed fibro-adenomata may have the inter-acinous tissue either adult fibrous tissue or embryonic tissue; but some authorities did not approve that the term sarcoma should be applied to these cases, for there was no evidence that clinically they behaved as malignant tumours.—Dr. AUST LAWRENCE drew attention to the occasional combination of fibroid uterus and sarcoma, showing the analogy of the uterus and breast.—In reply, Mr. MORTON said that he had not spoken of the tumour structure to which Dr. Firth evidently referred—adeno-sarcoma of the breast. It was not a combination of this tissue with fibro-adenoma—a mixture common enough—but the presence of nodules of pure sarcoma without any gland tissue, in an enormous fibro-adenoma, that was so interesting. He would not expect the glands to be affected in sarcoma of the breast, and it was too early to say whether metastatic growths were likely to occur or not. In connection with the subject to which Dr. Lawrence had called attention—the similar combination of sarcoma with fibro-myoma of the uterus, or rather the supposed transformation of the innocent into the malignant growth—Mr. Morton called attention to a recent statement of Mr. Bland Sutton, that it was desirable to have evidence of secondary growths in cases in which such transformation was said to occur. In Dr. Lawrence's case he had found at the necropsy secondary growths in all parts.

April 13th, 1898.

Dr. J. E. SHAW, President, in the Chair.

Mr. PAUL BUSH, for Mr. C. A. Morton, showed a patient from whom Mr. Morton had excised the upper end of the tibia for myeloid sarcoma, and who was exhibited at a meeting of the Society a year ago.[1] The president of the Society had requested Mr. Morton to show the patient again in a year's time. There was no sign of recurrence, nor was such to be expected, as the growth was myeloid; and the man was able to get about and attend to his work very well. The shortening of the limb was made up for by a high-soled boot. No tendency to flexion had been observed, the union being osseous. Mr. Morton had operated on another case of myeloid sarcoma in the head of the tibia in the same way since operating on the case shown; both cases will shortly be published.

Mr. F. LACE showed a specimen of duct papilloma of the breast which he had removed from a girl aged 16. He remarked that the earliest recorded age at which such a condition had been found was 23. The tumour occupied the usual central position,

1 *Bristol M.-Chir. J.*, 1897, xv. 212.

with elastic prominences around the nipple, which was inverted, as was also the other nipple. There was some bloody discharge from the nipple. The tumour resembled exactly the condition figured by Bland Sutton, and which he calls intra-cystic papilloma, which occurs in the lacteal sinuses. Mr. Lace drew attention to the microscopical structure, which was unlike any illustration he had seen, in that, instead of the fibrous framework being scanty with scarcely any cellular elements, in this case the cells were very numerous, as were also the blood-vessels, the appearances being very suggestive of sarcoma.

Mr. PAUL BUSH showed (1) a tumour of the ovary weighing 4½ lbs., which he had successfully removed from an elderly lady during an acute attack of peritonitis, due to twisting of the pedicle. The tumour had been noticed for about ten years, and during the last two months had caused increasing obstruction to the bowels. On opening the abdomen a large quantity of bloody peritoneal fluid escaped, and the surface of the tumour showed decided signs of sloughing commencing: he exhibited numerous microscopical slides, which proved that the tumour was a fibro-myoma undergoing well-marked myxomatous degeneration, and he commented on the fact that this form of tumour of the ovary is not by any means a common one. (2) A large tumour of the vertebræ: it occurred in a young girl. At the *post-mortem* examination no other primary growth could be found, although every organ of the body was carefully examined; the microscopic slides demonstrated that it was a carcinoma and not a sarcoma.—Mr. MUNRO SMITH considered that the tumour of the ovary shown by Mr. Bush consisted of two distinct structures, one myxomatous and the other myomatous, *i.e.* consisting of unstriped muscular fibres.—Dr. WATSON WILLIAMS made some remarks on the question of so-called myxomatous degeneration. He referred to the fact that nearly all "mucous polypi" of the nose were really œdematous fibromata, and asked whether in Mr. Bush's case and in other similar cases the myxomatous degenerations might not be œdematous fibroma tissue rather than true myxomatous tissue. He suggested that the twisting of the pedicle might be one cause of such infiltration, producing, as it would, obstruction to the venous and lymphatic circulation.—Dr. AUST LAWRENCE thought the specimen to be one of fibroma of ovary, most likely showing slow degeneration with hemorrhage.—Dr. STACK thought the appearance unlike myxoma of the nose, the cells being so much more closely set; and that the myxomatous part was probably such *ab initio*, and that the specimen should be regarded as myxo-fibro-myoma, and not a myxo-fibro-myo-sarcoma.

Dr. J. O. SYMES exhibited three plates from different glycerinated calf-lymphs. All showed colonies of staphylococci and bacilli, the number of colonies being approximately proportional to the cloudiness of the lymph; one of the plates developed colonies of streptococci. One plate of unglycerinated human lymph, nearly clear, developed only three or four colonies of staphylococci and bacilli. The point of chief importance is to obtain a clear transparent lymph.—Mr. J. EWENS in his practice had never seen any bad results, when reasonable care as regards cleanliness, and ordinary sanitary precautions, had been taken. He preferred human to calf lymph.

Dr. THEODORE FISHER showed a selection of pathological specimens from those added to the Museum of the Bristol Royal Infirmary during the past year. There were, amongst others, the following specimens: A case of thrombosis of the basilar artery in diphtheria; Thrombosis of the meningeal veins in noma; Tricuspid stenosis; Tubercular disease of the pericardium; Subphrenic abscess opening into the left

lung; Fibroid disease of the lung, secondary to the presence of a portion of a tracheotomy tube in the bronchus; Thrombosis of the portal vein; Small chronic tropical abscess of the liver; Rupture of the pancreas; Abscess of the head of the pancreas; Adenomata of the kidney.

Dr. B. M. H. ROGERS read a paper on "Isolation after Diphtheria." (For this and the discussion which followed, see pp. 101–108.)

Mr. JAMES TAYLOR showed a lantern-slide of the temperature charts of twenty-three cases of influenza occurring in a girls' orphanage of forty-four inmates. The cases all occurred between January 12th and January 29th, 1898. In eleven of the cases after the initial fever, the rise of temperature continued for fourteen days or more, without any apparent complication. The rise was slight—about 99°—and in most of the cases it occurred in the morning, going down to normal in the evening. It did not seem due to the onset of menstruation, as some of the children were only eight or ten years old. There was an utter absence of any bronchial complications in all the cases. Three or four had slight tonsillitis. One child had enlarged glands in the neck which threatened to suppurate. In another case on the fourteenth day the temperature suddenly ran up to 104°, for which no cause could be found. As it subsided in thirty-six hours and the child made an uneventful recovery, it was thought to be a recrudescence of the influenza. Vomiting on the sixth day, lasting for twenty-four hours, occurred in one case, with no abdominal symptoms whatever, thought to be due to the influenza poison affecting the vomiting centre.—Dr. MARKHAM SKERRITT said that the interesting series of cases brought forward was in accordance with what was probably the usual experience —that while at its first appearance influenza had occurred in attacks of severe fever of short duration, in its later outbreaks the type had altered, so that the febrile symptoms were less intense and more prolonged. In his experience no drug had the slightest effect in cutting short the elevation of temperature.

Mr. MUNRO SMITH showed some lantern slides illustrating the development of the embryo.

May 11th, 1898.

Dr. J. E. SHAW, President, in the Chair.

Dr. A. J. Harrison and Mr. G. Munro Smith were appointed Auditors for the Society's accounts.

Dr. BARCLAY BARON showed a man, 68 years of age, who never remembers having breathed properly through his nose, and at 8 years old he was under treatment for ulceration of the nose. He has practically no anterior opening through the left nostril, and a very small one through the right nostril. The uvula is gone, the soft palate and pharynx are extensively cicatrised. On examining the naso-pharynx with a mirror, the septum is visible; there is no opening through the left nostril, it being occluded by a web, probably due to cicatricial tissue formation. On the right side there is an opening about the size of a pea. The case is interesting from its showing the extreme form of the ravages of syphilis of congenital origin.

Dr. J. O. SYMES showed specimens of lepothrix (trichomycosis nodosa) showing fine bacilli or oval cocci. The condition was accompanied by red sweat, and a red pigment-forming organism was isolated.

Dr. W. H. C. NEWNHAM showed a dermoid cyst successfully removed from E. N., aged 35, who was admitted to the Bristol General Hospital on March 2nd, 1898, with large abdominal tumour and great

pain in right iliac region. On April 10th the tumour was removed from the right ovary. It contained a tuft of hair, some cartilage, a large bony plate, and a quantity of sebaceous material. The patient made an uninterrupted recovery.

Dr. W. H. C. NEWNHAM read a paper on "Twelve Abdominal Sections." (1) *Disease of Ovaries (Cystic).* E. D., aged 42, was sent in April, 1897, for disease of both ovaries. The abdomen was opened and two large cystic ovaries were removed. The operation was completed in twenty minutes. The patient recovered without a bad symptom, and left one month after the operation. She is now in very good health, and has not suffered in any way since the operation. (2) *Ovarian Cyst.* On April 27th, 1897, a patient of Dr. Belfield was suffering most intense abdominal pain. She had kept her bed for some weeks. On opening the abdomen a semi-solid cyst, which turned out to be sarcomatous growing from the right ovary, was found. There were many adhesions, some to the intestine, which were separated with great difficulty. The operation lasted thirty-five minutes, and the patient made a very slow recovery, but she is now apparently quite well. (3) *Sarcomatous Tumour of Ovary.* M. T., aged 25, was admitted to the Bristol General Hospital on May 28th, 1897. While waiting for a consultation, patient was suddenly taken with symptoms of acute peritonitis. At 8.30 p.m. a very large solid sarcomatous tumour of the right ovary was removed. Posteriorly some of the small cysts had given way and were leaking into the general peritoneal cavity; this was apparently the cause of the peritonitis. The abdomen was thoroughly washed out and drained, the whole operation lasting thirty minutes. The patient recovered completely, but did not leave the Hospital until August 6th. How soon this may return, or whether it will at all, of course it is impossible to say. At present she is very well. (4) *Ovarian Tumour.* E. S., aged 50, sent up from Wales. She had noticed the swelling of her abdomen for two years. It was diagnosed as a simple ovarian cyst, and on July 27th it was removed. A gallon and a half of clear fluid ran from the cyst. The operation lasted thirteen minutes, and the patient left the Hospital well on August 21st. (5) *Ruptured Tubal Pregnancy.* M. G., aged 37, was first seen in consultation. She was supposed to have miscarried at four or five months. The uterus was empty, but there was a very large swelling in the pouch of Douglas. She was removed to the Hospital, and on August 13th, 1897, the abdomen was opened and a male fœtus and placenta were removed from Douglas's pouch. It was about the fourth to fifth month. The sac was thoroughly washed out and drained. The operation lasted thirty-five minutes. She went on well for a week, and then suddenly became quite changed, and died on the ninth day after the operation. At the necropsy general peritonitis was found. (6) *Ovarian Cyst.* L. C., aged 57, was admitted August 27th, 1897. On September 2nd, after consultation, the abdomen was opened and a very large ovarian tumour growing from the left side was found. When the cyst was emptied very numerous and dense adhesions to the intestine of the cyst-wall were found, and there was great difficulty in separating them. It was thought best to drain. The operation lasted fifty-three minutes. She was convalescent in one week, and left the hospital very shortly quite well. (7) *Pelvic Hæmatocele.* E. H., aged 24, admitted September 2nd. On September 11th the abdomen was opened, and a large quantity of dark clot (no placental-like tissue or trace of fœtus discovered) removed from a sac. This was thoroughly washed out with boracic lotion and drained. The operation lasted seventeen minutes. She had no bad symptoms, and left the hospital well on October 14th. (8) *Uterine fibroids.* L. P., aged 30, sent by Dr. Martin, of Weston-

super-Mare, for enormous fibroids, with excessive continuous uterine hemorrhage. After consultation, it was decided to open the abdomen and be guided by the condition of things then found. At the operation on January 18th, 1898, it was found that the simplest proceeding would be to remove two large cystic ovaries. This was done; but after ligaturing in the usual way, first the ligature on the right side and then that on the left slipped. After some trouble all the vessels were tied separately. After this no further trouble arose; there was no further uterine hemorrhage, and the patient made a very good recovery, leaving the hospital on February 15th. (9) *Ovarian Tumour.* M. P., aged 23, sent to me on January 23rd, 1898, by Dr. Norton. She had noticed a tumour in the abdomen for about a year. The diagnosis was an ordinary ovarian tumour on the right side. The abdomen was opened on February 1st; there were no adhesions, and the operation was apparently completed in ten minutes. As some hemorrhage was going on, the pedicle was pulled up, and it was found that the ligature had slipped. It was again transfixed and tightly tied, and a drainage-tube now inserted on account of the blood in the peritoneal cavity. In the evening the house-surgeon sent, as seven ounces of blood had been sucked up from the tube; but as the patient appeared so well and had such a good pulse, it was decided to leave her alone. She left the hospital quite well on February 27th, not having had a single bad symptom since the night of the operation. (10) *Malignant Disease of Omentum.* M. C., aged 38 years, was seen on January 23rd, 1898, with tumour of abdomen and vomiting. There was no trustworthy history; but the tumour itself appeared to be freely movable, with some fluid in the peritoneal cavity—an irregular part of the tumour, or what appeared like it, was to be felt *per vaginam* behind the uterus. It was also distinctly felt *per rectum.* Four days later the abdomen was opened. There was a large quantity of ascitic fluid, with very extensive malignant disease of the omentum; the peritoneum was also studded. A drainage-tube was immediately put in. The after-history up to the present has been uneventful: the patient returned home in a fortnight, apparently much better; the sickness had then quite stopped, and she is now better than before the operation. (11) *Pyo-salpinx.* A. R., aged 45, admitted to the Hospital for swelling of abdomen, supposed to have lasted for eight days, coming on with sudden faintness, sickness, and some uterine hemorrhage. On admission she had great tenderness of the abdomen, more especially in the right iliac region, and at this spot some amount of thickening and resistance could be made out. She was so very anæmic, and as this was markedly increasing, it was thought that some hemorrhage might be taking place into the peritoneal cavity. On February 16th, 1898, the day after admission, a consultation was held, and the same afternoon the abdomen was opened, and mischief connected with the right ovary and tube was found; and, after unusual difficulty in separating the adhesions, the ovary and an enormously dilated tube containing some purulent matter were removed. The tube was with great difficulty distinguished from a piece of intestine. The abdominal cavity was irrigated with saline solution, and a large quantity left behind. There was some caseating material in a portion of the tube. Patient now doing very well. Wound healed. Drainage-tube remained in for a week. (12) *Ovarian Cyst.* E. P., aged 30. Confined seven months ago, and then noticed she still remained about the size of pregnancy at six months. She was sent by Dr. Walker, of Coleford, on February 8th, 1898. On February 18th the abdomen was opened, and an ovarian cyst found, containing about ten pints of dark-brown fluid, with the pedicle so twisted that at

least six complete turns were required to straighten it out. No drainage-tube was used, and the operation only lasted thirteen minutes. The stitches were all removed on the tenth day, and patient is now quite well.—Mr. C. A. MORTON said that since the beginning of 1897 he had performed abdominal section in thirty-six cases. In this time all his operations for ovarian and uterine tumours, for gallstones, and for recurrent appendicitis had been successful. He had gained courage in dealing with abscesses lying deeply in the pelvis, and had operated successfully on three such cases by evacuating the pus through the peritoneal cavity, thoroughly flushing with sterilised saline solution and draining. The last abdominal case on which he had operated was sent to him as one of ovarian cyst. All that could be made out was a very soft fluctuating area in the right lower abdomen. It had no definite outline, and could hardly be called a swelling. It turned out to be a cyst in the right broad ligament, raising the pelvic peritoneum over it, and lying in contact with the iliac vessels and ureter, and the side of the uterus. Its wall was very lax and soft, and it required much careful dissection for its removal. The result was quite satisfactory.—Mr. T. CARWARDINE said it was important to know why there was slipping of ligatures in the cases mentioned.—Dr. E. H. E. STACK would like to know the result of microscopic examination of the two cases of sarcoma, and whether the opposite ovaries were normal. —In reply, Dr. NEWNHAM said that the silk used in the three cases where the pedicle slipped had possibly been boiled too much. He now used silk kept in a mixture of carbolic and spirit. A microscopic examination was made of the sarcomatous tumour removed; there was no doubt about it: at the time of the operation the other ovary appeared to be quite healthy.

Mr. W. R. ACKLAND read a paper on "Some Secondary Effects of Dental Irritation." In his own experience he had seen a boy who was myopic, and in some degree astigmatic, get infinitely better when his mouth, which had been rather overcrowded, was put into good order. In another case there was photophobia and discolouration of the iris, with a slight decrease of ocular tension of the left eye. When two bicuspid stumps which showed signs of tenderness were removed, the photophobia disappeared, and the discolouration of the iris gradually cleared up. He had seen other cases in which photophobia was a concomitant of dental mischief. In a patient of middle age the extraction of the right lower wisdom tooth, which was decayed, was followed by the loss of earache and deafness from which the patient had suffered for some time. He had seen other cases, principally in children, in which otalgia depended upon dental irritation. He had also seen one or two cases of otorrhœa due to the same cause, and a case in which an obstinate chronic rhinitis disappeared after the extraction of a canine root; but this may have been a coincidence. Text-books and journals give a long list of all sorts of reflex troubles, even uterine, due to dental irritation, and it is well to have this possible cause always in view.—Mr. W. H. HARSANT had frequently met with cases of otalgia due to dental irritation, but was inclined to be sceptical as to any connection between middle-ear suppuration and carious teeth: he thought it was more probably a case of two distinct affections existing simultaneously.—Mr. EWENS remarked that neuralgic pain in the ear was frequently associated with decayed teeth in the lower jaw.—Dr. E. J. CAVE drew attention to referred pain in the upper arm and neighbourhood of the shoulder in connection with dental caries.—Dr. AUST LAWRENCE thought that the only relation between the teeth and the uterus was that there was an os connected with both.

Professor FAWCETT exhibited (1) Various anatomical specimens and models, amongst which were: (*a*) A series of carpal and metacarpal bones, mounted separately on removable handles, after a method in use at Leeds; (*b*) A model in wax of the muscles, vessels, and nerves of the orbit, by Tramond of Paris. This model was presented to the anatomical museum by the President of the Bristol Medico-Chirurgical Society (Dr. J. E. Shaw); (*c*) A very successful cast in plaster of the right cerebral hemisphere.

(2) A series of sections (microscopical) of the hind and mid brain prepared by Campbell's modification of the Pal-Weigert method. These specimens were shown on the screen by the aid of the lantern, and the tract of the fillet was especially dealt with.

(3) A number of specimens of the frontal sinuses opened in various ways, showing especially the following points: (*a*) That the sinuses vary very much in size individually; (*b*) That they do not necessarily correspond with the elevations—superciliary ridges and glabella—under which they lie, several specimens showing large elevations and very small sinuses; (*c*) That they are usually asymmetrical, the asymmetry corresponding with that of the nasal cavities; (*d*) That the best site for trephining with certainty is in the region of the internal angular process of the frontal bone, as has been insisted upon by Mayo Collier, and Tilley (*Lancet*, 1896), and others; (*e*) That a perforation in such a situation is most likely to reach the particular sinus desired.

J. PAUL BUSH, *Hon. Sec.*

The Library of the Bristol Medico-Chirurgical Society.

The following donations have been received since the publication of the list in March:

May 31st, 1898.

Joshua S. Beddome (1)	4 volumes.
J. Paul Bush (2)	4 ,,
Detroit Public Library (3)	2 ,,
James Fawn & Son (4)	38 ,,
L. M. Griffiths (5)	1 volume.
Mrs. Henry Marshall (6)	146 volumes.
Staff of Middlesex Hospital (7)	1 volume.
J. E. Prichard, M.B., and Arthur W. Prichard (8)	73 volumes.
W. U. Reber, M.D. (9)	25 ,,
R. Shingleton Smith, M.D. (10)	1 volume.

Unbound periodicals have been received from Mr. J. Paul Bush, Dr. J. E. Prichard and Mr. Arthur W. Prichard. A framed picture has been presented by Mrs. Henry Marshall and unframed pictures have been received from Dr. J. E. Prichard and Mr. A. Ellis Wynter.

TWENTY-EIGHTH LIST OF BOOKS.

The titles of books mentioned in previous lists are not repeated.

The figures in brackets refer to the figures after the names of the donors, and show by whom the volumes were presented. The books to which no such figures are attached have either been bought from the Library Fund or received through the *Journal*.

Abernethy, J. ... *Surgical Observations.* 2 parts ... ... (6) 1804-6
Adams, Sir W. ... *On Artificial Pupil* ... ... (8) 1819
Alison, W. P. ... *Outlines of Pathology and Practice of Medicine* ... (8) 1843
Allbutt, T. C. [Ed.] *A System of Medicine.* Vol. V. 1898
Anderson, I. ... *Yellow Fever in the West Indies* 1898
Ashton, T. J. ... *Diseases of the Rectum and Anus* ... ... (6) 4th Ed. 1863
Astruc, J. ... *De Morbis Venereis.* 2 vols. ... (8) Editio Altera 1740
Balfour, G. W. ... *Diseases of the Heart* ... ... 3rd Ed. 1898
Bannatyne, G. A. *Rheumatoid Arthritis* ... ... 2nd Ed. 1898
Barker, T. H. ... *On Malaria and Miasmata* ... ... (8) 1863
Barnes, R. ... *Diseases of Women* ... ... (6) 1873
Barth et H. Roger, [J.-B.-P.] *Traité pratique d'Auscultation* ... ... (8) 1841
Bastian, H. C. ... *Aphasia and other Speech Defects* 1898
Beard, J. ... *On Certain Problems of Vertebrate Embryology* 1896
Beasley, H. ... *Book of Prescriptions* .. .. (4) 1854
Beevor, C. E. ... *Diseases of the Nervous System* 1898
Bennet, J. H. ... *On Inflammation of the Uterus* ... ... (6) 2nd Ed. 1849
Birch, S. B. ... *Constipated Bowels* ... ... (4) 1861
Bird, G. ... ... *Natural Philosophy*... ... ... (6) 3rd Ed. 1848
Bradshaw, W. ... *The Anatomy of Dyspepsia* ... ... (4) 1864
Brodie, T. G. ... *Essentials of Experimental Physiology* 1898
Brown, J. ... *Elementa Medicinæ.* 2 vols. in 1... ... ... (8) 1784
Browne, Sir T. ... *Religio Medici.* (Ed. by D. L. Roberts) 1898
Bryant, T. ... *On Ovariotomy*... ... ... (8) 1867
,, ... *The Practice of Surgery* ... ... (4) 1872
Bucknill, J. C. ... *Notes on Asylums for the Insane in America* ... (6) 1876
Burnett, C. M. ... *Insanity tested by Science* ... ... (8) 1848
Cabanis, P. J. G. *Rapports du Physique et du Moral de l'Homme.* 2 vols. ... ... (4) 4e Éd. 1824
Cabot, R. C. ... *Clinical Examination of the Blood*... ... ... 2nd Ed. 1897
Campbell, H. ... *Respiratory Exercises* 1898
Catalogue of the Library of the Ophthalmological Society of the United Kingdom ... ... (8) 2nd Ed. 1893
Chambers's Biographical Dictionary 1897
Charcot, J. M. ... *Clinical Lectures on Senile and Chronic Diseases.* (Tr. by W. S. Tuke) ... ... (6) 1881
Chavasse, [P.] ... *Advice to a Mother.* 15th Ed. (Ed. by G. Carpenter) [1898]
,, ... *Advice to a Wife.* 14th Ed. (Ed. by F. Barnes) [1898]
Chelius, M. J. ... *Handbuch der Chirurgie.* 2 bd. (8) Dritte Auflage 1830
Christie, J. [Ed.] *The Medical Institutions of Glasgow* ... ... (8) 1888
Christison, R. ... *A Treatise on Poisons* ... ... (6) 4th Ed. 1845
,, ... *Dispensatory* ... ... (6) 2nd Ed. 1848
Clark, Sir J. ... *The Sanative Influence of Climate*... ... (8) 3rd Ed. 1841

Colbatch, J. ... *Novum Lumen Chirurgicum; or a New Light of Chirurgery* ... ... (4) 4th Ed. 1699
Coles, A. C. ... *The Diseases of the Blood* 1898
Coley, J. M. ... *Diseases of Children* ... ... (6) 1846
Combe, A. ... *Physiology applied to the Preservation of Health* (4) 3rd Ed. 1835
Cooke, W. ... *Mind and the Emotions* ... ... (1) 1839
Cooper, B. B. ... *Hunterian Oration* ... ... (1) 1853
Councilman, F. B. Mallory and J. H. Wright, W. T. *Epidemic Cerebro-Spinal Meningitis and its Relation to other Forms of Meningitis* 1898
Craigie, D. ... *Practice of Physic.* 2 vols. ... ... (6) 1837-40
Cullen, W. ... *First Lines of the Practice of Physic.* 2 vols. (Ed. by P. Reid) ... ... (6) 1816
Culpeper, [N.] ... *English Physician and British Herbal.* (Ed. by Dr. Dickenson) ... ... (4) 1814
Cyclopædia of Anatomy and Physiology, The. (Ed. by R. B. Todd) 4 vols. (6) 1836-52
Cyclopædia of Practical Medicine, The. (Ed. by J. Forbes, A. Tweedie, and J. Conolly) Vols. I.-III. .. ... (6) 1833-34
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Local Medical Notes.

BRISTOL.

OBITUARY.—By the death of Dr. Henry Marshall, on Sunday, the 24th of April, after a few days' illness, the profession and public of Bristol have suffered a great loss. A son of a former Vicar of Christ Church, Clifton, he received the elements of his medical education at the Bristol Medical School, completing it at the University of Edinburgh, where he took his M.D. He was also F.R.S.E. There is little doubt that the magnetic influence of Syme, which so dominated the Edinburgh School, induced Dr. Marshall, on his starting practice, to adopt the career of a surgeon, and it was in this capacity that for ten years he was attached to the Bristol General Hospital. From 1863 to 1872 he lectured on Forensic Medicine at the School. His tastes and

inclinations, however, led him to resign this appointment and practise as a physician, for which his cultured manner eminently fitted him; as such, he had for many years a very large practice in Clifton. He was at one time Secretary of the Bath and Bristol Branch of the British Medical Association, and afterwards became its President. It was while he held the post of Secretary that the Association paid its second visit to Bristol. At one time he took part frequently in the discussions at the meetings, but in later years he seldom came, and still less frequently spoke. Dr. Marshall had many interests outside his profession. He was a man of unbounded vigour and spirit, and his 65 years sat lightly on him. He was an energetic churchman, and for some time he had been President of the local branch of the English Church Union. He was a fluent forcible speaker, and had the gift of expressing his thoughts in well-chosen words. His death will be felt by numerous friends and patients who admired the strong, sincere and striking worth of the man, and the kindly courteousness with which his name will ever be associated.

Under the presidency of the Dean of Bristol, a meeting has been held at which it was resolved to establish at the General Hospital a Memorial to Dr. Marshall and to ask for permission to place a tablet in the Cathedral. Subscriptions for the "Marshall Memorial Fund" should be sent to Messrs. Stuckeys' Banking Company, Limited.

Greig Smith Memorial.—On May 5th the High Sheriff (Mr. F. Richardson Cross), in the presence of a large number of persons, unveiled the bronze bust of the late James Greig Smith which has been placed in the lobby of the Museum. Mr. J. W. Arrowsmith, the Chairman of the Memorial Committee, said that £520 had been collected, and that after mature consideration it had been determined to place a bust in the Museum, a medallion in the operating theatre of the Infirmary, and give the remainder to the Committee of that Institution to assist in the refitting of that room. The High Sheriff, in a few well-chosen words, referred to the great abilities of Mr. Greig Smith, and the severe loss the surgical world and the public had suffered by his death at a comparatively early age.

EXETER.

Obituary.—We regret having to record the loss of one of our district Editors, Dr. Arthur George Blomfield, whose death, at the age of 43, occurred at his residence, 34 West Southernhay, Exeter. He received his professional education at Aberdeen University and King's College, London. He became qualified in 1877, taking the L.S.A., and in 1878 the M.R.C.S. In 1882 he obtained the M.D. degree of the Aberdeen University. He was for three years house-surgeon to the West Norfolk and Lynn Hospital, and for six and a half years house-surgeon at the Devon and Exeter Hospital. He resigned this post in 1887, and began practice as a physician. Dr. Blomfield was physician to the Devon and Exeter Hospital, the Exeter Dispensary, the West of England Institution for the Deaf and Dumb, and to the Exeter Lying-in Charity. He was a gentleman of extremely courteous manners. As a consultant, he maintained the highest traditions of the profession, and could always be relied upon to consider both the interests of the patient and of the medical man in attendance. His popularity with his poor patients was evidenced by the large numbers of them who attended his funeral.

Dr. R. V. Solly has kindly undertaken to act as our Editorial representative in his neighbourhood in succession to Dr. Blomfield.

Congress for the Consideration of Tuberculosis.

Professor Nocard calls our attention to the fact that the Fourth Congress on this subject will be held in Paris from July 27th to August 2nd. Dr. L. H. Petit, 18 Rue du Pré-aux-Clercs, Paris, will be pleased to give information in detail concerning it.

The Sanitary Institute.

The 17th Congress of the Sanitary Institute will begin at Birmingham on September 27th, with Sir Joseph Fayrer as President.

SCRAPS.

PICKED UP BY THE ASSISTANT-EDITOR.

Practical Dietetics.—"My wife," he remarked, "has made a very important discovery." "Indeed! what is it?" "A new substance that is apparently indestructible." I recalled the fact that his wife had been a professor of natural sciences prior to her marriage, and inquired if she had been long at work upon the invention. "No," he replied, "it came about quite by accident. She was trying to make a sponge cake."—*Lippincott's Magazine*, quoted in *Medical Age*.

Medical Philology (XXVI).—The *Promptorium* has "Cruschylbone, or grystylbone. *Cartilago*." Crush is obsolete in English as a signification of cartilage or gristle, but Forby, in *The Vocabulary of East Anglia*, published in 1830-38, from which the *New English Dictionary* quotes, and to which Mr. Way's note in the *Promptorium* refers, gives "*Crish, Crush*, cartilage, or soft bones of young animals, easily crushed by the teeth," and "*Crush, crustle*, gristle." Mr. Way also says that "in Suffolk crussel or skrussel has a similar meaning."

The etymology of cartilage is unknown.

"Sur un Médecin."—The Latin epigrams, especially the medical ones, have been exceedingly difficult to equal for sting and conciseness. Here is one however, from the French of this century, attributed to François de Neufchâteau, which may take rank with them. It comes from page 249 of the 1892 issue of *La Lyre Française*, edited by Gustave Masson, and published by Macmillan and Co.:—

"Mes malades jamais ne se plaignent de moi,"
Disait un médecin d'ignorance profonde.
— Ah! repartit un plaisant, je le crois;
Vous les envoyez tous se plaindre en l'autre monde.

Clinical Records (23).—A description of the modern malady, Morbus Sabbatticus, or Sunday sickness, which we have somewhere met, is too good to lose. The peculiar features are: (1) That it only attacks members of the Church; (2) It never troubles them any day but Sunday; (3) The symptoms vary, but the patient can always sleep well the night before, and can always eat a hearty Sunday dinner shortly after an acute attack; (4) No case was

ever known where the sick man was not able to be at his business early Monday; (5) It is generally the head of the family that is attacked; (6) When ladies are affected there will generally be found a complication with the dressmaker who failed to send the new garment on Saturday, or with a perfect fright of a bonnet; (7) In this disease no physician is summoned; (8) It never hurts the body, but it slays souls.—*Church Worker.*

Medical "Bits of Old Bristol" (7).—During the epidemics of the Black Death, the Jews were often accused of poisoning the wells from which the drinking water was obtained. It is therefore of special interest to note how the citizens of Bristol obtained their drinking water in the fourteenth century when the plague was rife.

The Rev. W. Hunt says that "the one redeeming feature in the sanitary condition of the town was that it had an abundant supply of water conveyed through conduits, for which it was largely indebted to its monasteries." (*Bristol*, Historic Towns Series, 1889, p. 78). A great deal of information on this subject will be found in a booklet on "The Pipes, Pumps, and Conduits of Bristol," consisting of articles written by Joseph Leech in *The Bristol Times and Felix Farley's Journal.* I give some notes about a portion of this water-supply, reserving for a future number the consideration of the remainder.

The house and grounds of the Carmelite Friars occupied the site extending from the Red Lodge in Park Row to the bottom of Colston Street and from Pipe Lane to the eastern end of Trenchard Street, where not long ago Steep Street existed. This foundation of the Carmelites dated from 1267, soon after which they obtained a supply of water from a spring on Brandon Hill. It was conveyed thence in a pipe which followed the course afterwards taken by Park Street and then passed along the line of Frogmore Street through Pipe Lane (to which it gave its name) to the Priory. From the cistern there a pipe afterwards supplied the parish of St. John, going through Host Street, over Frome Bridge, and then along Christmas Street into Broad Street, whence, about 1828, it was diverted to the spot in Nelson Street now familiar to all passers by.

Obstetrics Home and Foreign (5).—Henry, in his *History of Britain*, i. 459 tells us that "amongst the ancient Britons, when a birth was attended with any difficulty, they put certain girdles made for that purpose about the women in labour, which they imagined gave immediate and effectual relief. Such girdles were kept with care, till very lately, in many families in the Highlands of Scotland. They were impressed with several mystical figures, and the ceremony of binding them about the woman's waist was accompanied with words and gestures, which showed the custom to have been of great antiquity, and to have come originally from the Druids."—Brand's *Popular Antiquities*, ed. Bohn, 1849, vol. ii., p. 67.

The most reasonable of all the means adopted by primitive people to assist the patient in her labour is the steady compression of the abdomen and following down of the child in its descent. This is a feature common to the red, yellow, and black races, be it by compression of the fundus by the encircling arms of the husband, upon whose lap the patient rests; be it by the hands of one of the female assistants, sometimes from behind, sometimes from the front; or by a broad cloth or binder (California Indians and the natives of Southern India), which an assistant tightens during each pain—a treatment which has not yet lost the favour of obstetricians and was once quite popular. There are some who still place a towel about the abdomen of their patients, thinking to assist the descent of the child by the pressure exercised; it seems both to correct the direction of the child's descent and to hasten its passage. In its extreme and worst feature, we see this method of treatment exemplified by the Siamese, who seek to force the expulsion of the fœtus in difficult cases by permitting the attendant to trample upon the abdomen of the patient, who is lying prone upon her back. All primitive people resort to expression in one way or another. The Finns, in tedious cases, compress the abdomen by a belt or binder of some kind, or by holding the patient up, suspended, and shaking her as they would a pillow out of its case—a proceeding which is more efficient than mild, and serves as a last resort to the natives of Mexico, as well as other far distant people.—Engelmann's *Labor among Primitive Peoples*, 1882, p. 132.